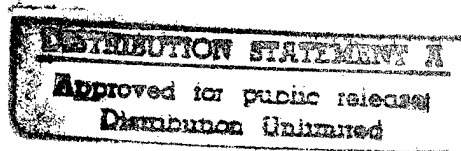


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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2442

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30 August 1983

## EAST EUROPE REPORT ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2442

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HUNGARY-USSR SIGN ECONOMIC COOPERATION AGREEMENTS

Budapest MAGYAR HIRLAP in Hungarian 26 Jul 83 p 7

[Report by Hanna Szalay: "Signed in Moscow, Four Economic Agreements Based on Mutual Interests"]

[Text] Four partial agreements on economic cooperation were signed in Moscow last week, during the official and friendly visit to the Soviet Union of the Hungarian party and government delegation headed by Janos Kadar. It might appear that the signing of the agreements was linked to the visit, but essentially the two events were independent of each other. The significance of their coincidence is rather symbolic: it confirmed in practice one of the conclusions included also in the communique issued after the summit talks, namely the two countries' mutual interest in the development of their relations.

The four agreements are: extension of the alumina-aluminum agreement through 1990; establishment of a "chicken factory" in Azerbaijan; demonstration of our industry-type corn production systems; and participation in the reconstruction of a shoe factory.

The alumina-aluminum agreement concluded in 1962 is effective until 31 December 1985. According to the agreement just signed, the agreement is being extended through 1990, and its further extension for another 10 years, through the end of this century, will be discussed during the coordination of the next five-year plans. Pursuant to the signed extending protocol, we will be shipping annually 530,000 tons of alumina and 5,000 tons of semifinished aluminum products to the Soviet Union. The Soviet Union processes the alumina into aluminum and undertakes to ship back 205,000 tons.

Coordination

This agreement is a good example of sensible coordination. We have bauxite, the basic material for obtaining alumina (incidentally, there is no shortage of bauxite in the Soviet Union), and developed aluminum processing capacity. And the Soviet Union has the relatively cheap electricity that is essential to converting alumina into aluminum, a highly energy-intensive process. (The amount of electricity necessary to produce a ton of aluminum is 15,000 kWh or more.) The Soviet Union is bridging the gap between our paucity of energy and our highly developed aluminum fabricating industry because in this agreement they see a suitable reserve for the expansion of capacity to produce semifinished aluminum products.

In accordance with the Azerbaijan "chicken factory" agreement, the Babolna Agricultural Combine will establish there a poultry-production base that, in addition to raising broilers, will function also as a breeding and reproduction station.

The site of the "chicken factory" will be at Sezan', about 100 kilometers from Baku. Once its construction has been completed, it will only be necessary to ship annually from Babolna 164,000 pairs of parents. This stock will produce, in addition to the 269,000 pairs of parents needed here annually, also about 1.6 million pairs of parents for other Soviet farms of this type. In the final outcome this will provide the stock needed to raise 150 million broilers a year.

#### Demonstration Plots

According to the agreement, we will supply 168 light aluminum buildings, each enclosing an area of 1100 square meters, with the complete technology that the breed requires. To these buildings there will be added a laboratory for veterinary medical diagnostic tests and feed analysis. Over a period of two years we will be supplying parts for the operation of the plant. Babolna experts will assemble the plant and operate it during the warranty period. The Soviet experts will be trained according to a specified program, in Hungary and the Soviet Union. For the operation of the plant during the warranty period, Babolna will be supplying the breeding stock, premixed feed and vitamin additives as well.

Since 1978, Babolna has been operating already four production systems in various parts of the Soviet Union. The general consensus is that the systems have been successful; in other words, that they have been operating faultlessly and with high efficiency. The agreement just signed is an outgrowth of a decision that the Hungarian-Soviet intergovernmental joint commission adopted in July 1981.

In accordance with the concluded agreement to demonstrate our corn production systems in the Soviet Union, Babolna will establish a demonstration plot in Poltava Oblast in the Ukraine; and Babolna will establish one in Cherkassy Oblast, likewise in the Ukraine. The purpose of the demonstration plots is to spread these closed technological systems in the Soviet Union. In other words, their success will become a source of further deliveries. Both Hungarian contractors will start this year the basic preparations for the application of these advanced corn-production technologies. The Soviet government will bear the costs.

On a total area of 2000 hectares, the first phase of the demonstrations will last three years. The Hungarian and the Soviet parties to the venture will share fifty-fifty the additional yield over and above the average yield achieved earlier on the designated farms. The demonstrations will also provide for the Hungarian experts an opportunity to gain further experience.

Through these two agreements the Hungarian economy is able to participate in the Soviet food program's realization in a way that offers wide opportunities for testing and utilizing one of the most promising branches of Hungary's export capacity, the export of Hungarian intellectual effort embodied in a practical form.

The concluded agreement that calls for reconstruction within the shoe industry follows a similar pattern. It serves well our objective to export technology and simultaneously ensures our participation in increasing Soviet output of consumer goods. If judged favorably, this participation could lead to further orders in this enormous and insatiable market.

#### Dress Shoes

According to the agreement just signed, the Hungarian side--relying mainly on Minosegi Cipogyar (Quality Shoe Factory)--will participate in the technological reconstruction of the Moscow Zarya Shoe Industry Association imeni Paris Commune. It will install a new production line, with mostly Hungarian machinery, on which Hungarian models are to be produced, with Hungarian work organization.

The Hungarian side undertakes to design luxury models for women. To produce the models chosen by the Soviet side, we will supply--on the basis of Minosegi Cipogyar's experience--the production technology, the organization of the work stations and the work organization, and we will also train the Soviet personnel. In the Shoe Factory imeni Paris Commune the production line will be equipped with Hungarian machinery, and Hungarian materials and supplies will be used for the first year's output. The duration of this project is one year.

The Hungarian shoe industry has already been exporting one-fourth of its output to the Soviet Union, and within this the largest volume and the most demanding models have been from Minosegi Cipogyar, which has assumed a lion's share of the agreement's realization.

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## BULGARIA

### TRADE RELATIONS WITH BENELUX COUNTRIES REVIEWED

Sofia VUNSHNA TURGOVIYA in Bulgarian No 6, 1983 pp 12-17

[Article by Mityu Uzunov: "Economic Relations between Bulgaria and Belgium, The Netherlands and Luxembourg"]

[Text] The combined territory of Belgium, The Netherlands and Luxembourg is 70,400 square kilometers (30.5, 37.3 and 2.6, respectively) with a population of 24.5 million (9.8, 14.3 and 0.4). These countries form the Benelux economic union. They are members of the EEC and NATO.

All three have a strongly developed economy and high production concentration. Their leading sectors are ferrous and nonferrous metallurgy, shipbuilding, machine building, electronics, electrical engineering and the chemical, textile and food industries. Agriculture, which ensures a positive balance in their trade in agricultural and food commodities plays an important role in their trade. Animal husbandry is particularly well developed. The Netherlands holds a leading position in the world in natural gas production, which is in excess of 100 billion cubic meters per year.

Central positions in the economy of these countries are held by large monopoly associations and banks, such as Shell, Phillips, Unilever, Akso, Arbed, Solvey, Societe Generale, Banque Bruxelles-Lambert, AMRO-Bank, Banque Generale, ABI and many others. Leading United States, Japanese, FRG and other banks and companies have opened numerous subsidiaries (industrial, banking and commercial) in Belgium, The Netherlands and Luxembourg. The ports of Antwerp and Rotterdam play a prime role in the processing of goods from and to Europe.

The 1982 combined GNP of Belgium, The Netherlands and Luxembourg was about \$208 billion (75.3, 130.0 and 2.7, respectively), with exports totalling some \$117.2 billion (49.9, 65.5 and 1.8), and imports of about \$118.4 billion (55.0, 61.8 and 1.6). Their share in international trade in 1982 was about 6.5 percent.

The main commodity groups in Belgium's imports are: petroleum products, 23 percent; transportation facilities, 10.8 percent; machines and equipment, 10.0 percent and others. In Belgium's exports, they are: ferrous metals, 13.8 percent; transportation facilities, 12.4 percent; chemicals and pharmaceuticals, 11.0 percent, etc. Leading Dutch imports are petroleum products, 26.5 percent; foodstuffs, 12.8 percent; chemicals and pharmaceuticals, 8.8 percent,

and others. The main Dutch exports are fuels, 24.3 percent; foodstuffs, 18.9 percent; chemicals and pharmaceuticals, 15.0 percent, and others.

The share of the EEC members in Benelux trade ranges between 60 and 80 percent, and that of the European socialist countries, 2-3.5 percent. The 1982 economic situation of the Benelux countries was characterized by poor domestic demand, production decline and investment stagnation. Unemployment exceeded 500,000 people in Belgium, or more than 12 percent of the active population. A similar situation prevailed in The Netherlands. The solution to the crisis is sought in reducing production costs, modernization and structural reconstruction in a number of basic areas in industry and, consequently, increasing output and widening exports, including to the European socialist countries.

Bulgaria has maintained traditional trade and economic relations with the Benelux countries. Before the enactment of the unified foreign economic policy of the EEC they were based on the the 13 May 1970 long-term trade agreement between Bulgaria and the Benelux economic union. Currently economic relations between Bulgaria and The Netherlands are based on the 11 December 1974 long-term agreement on economic, industrial and technical cooperation; relations with the Belgium-Luxembourg economic union are governed by the 26 March 1975 long-term agreement on economic, industrial and scientific and technical cooperation.

Benelux trade policy toward Bulgaria is based on its affiliation with the EEC and the community's trade policy toward Bulgaria, which includes a number of tariff and nontariff restrictions on Bulgarian commodity exports, as follows:

- community quotas set for the importation of a number of commodities (three sectorial technical agreements have been signed with the EEC Commission on conditions governing exports of Bulgarian ferrous metals, textiles and textile products, live animals and meat from small cattle to EEC members); separate quotas are also unilaterally set by the EEC Commission. The separate Benelux quotas concerning Bulgaria include restrictions on exports of early potatoes, nitrogen fertilizers, synthetic dyes, pressed wood tiles, shoes, slippers, pane glass, glass containers, porcelain and ceramic household utensils, aluminum ingots, untreated zinc, electric motors, bicycles and others;
- high customs tariffs. The rates of the general EEC tariff -- "conventional" part -- are applied to goods exported by Bulgaria to EEC countries, according to which customs fees range from 0 to 35 percent of their value;
- antidumping procedures instigated by the EEC Commission regarding our exports to the Common Market of a number of goods such as calcinated soda, electric motors, pressed wood tiles, and others;
- veterinary-sanitary requirements regarding our exports of various types of meat, goat cheese, etc.

The intergovernmental commissions for economic, industrial and technical cooperation, set up on the basis of the long-term agreements, hold annual meetings, the most recent of which took place in June 1983 in The Hague, with The Netherlands, and in June 1982 in Brussels, with the Belgium-Luxembourg

Trade Between Bulgaria and the Benelux Countries\*  
(million foreign exchange leva)

	Trade					Exports					Imports				
	1973	1975	1980	1981	1982	1973	1975	1980	1981	1982	1973	1975	1980	1981	1982
Belgium	42,04	47,59	108,87	111,30	91,20	21,37	15,86	30,45	20,36	23,70	20,67	31,73	78,42	90,94	67,50
Holland	42,16	74,72	96,50	124,00	103,30	13,35	18,26	49,20	60,60	41,10	23,80	56,45	47,30	63,40	62,20
Luxemb.	—	—	0,73	2,51	1,67	—	—	0,50	0,69	0,89	—	—	0,23	1,82	0,78
Total	84,20	122,31	206,10	237,81	196,17	34,72	34,12	80,15	81,65	65,69	49,47	88,18	125,95	156,16	130,48

\*Including some export and import deals carried out by Benelux companies involving goods from or to third countries.

economic union. Activities related to economic cooperation were analyzed at these meetings, and measures and recommendations for their further energizing and expansion were formulated.

The conditions for establishing on Bulgarian territory mixed organizations with the participation of Western companies, based on Ukase No 535 of the State council of the Bulgarian People's Republic of March 1980, were discussed at the latest meetings of the mixed intergovernmental commissions and in the course of the implementation of other bilateral economic measures. Draft agreements on reciprocal encouragement and protection of investments were exchanged between Bulgaria and the Benelux countries in 1981 and 1982 with a view to establishing a contractual-legal base for the activities of these mixed organizations. The first round of talks on this agreement was held with The Netherlands in Sofia last October. A draft agreement on avoiding double taxation will also be exchanged with these countries.

Possibilities have appeared in recent years for energizing economic relations between Bulgaria and the Benelux group. Trade has increased and so have production and technical cooperation and joint activities in third-country markets. The visits exchanged by economic delegations on the governmental and business levels had a favorable influence on and provided a proper direction to this process.

A number of initiatives were carried out by the chambers of commerce and industry. Bulgarian economy and technology days were held in Rotterdam in November 1980 and Brussels in 1982, in the course of which interested representatives of Dutch and Belgian business circles were acquainted with Bulgarian economic and technical possibilities. This influenced the further development of industrial and engineering cooperation, including activities in third-country markets.

Belgian and Luxembourg economy and technology days were organized, in June 1981, and Dutch economy and technology days were held in April 1982 in Sofia, respectively organized by the Belgian Foreign Trade Service and the Dutch Trade Development Council. These events enabled interested specialists from

ministries, departments, institutes and foreign trade organizations to familiarize themselves with the latest achievements of scientific and technical progress in these countries and to discuss possibilities for their joint application in our country or in third markets.

In the same sequence, let us note the regular participation of Benelux companies in the Plovdiv spring and autumn fairs and the organization of individual and collective symposiums and the participation of Balkankarimpeks, Lesoimpeks, Bulgarplodeksport, Vinimpeks and others in international specialized exhibits in Belgium and The Netherlands.

Trade between Bulgaria and the Benelux countries has been dynamic over the past 10 years (see table).

In 1982 the Benelux accounted for 0.90 percent of Bulgaria's total trade, including 6.56 percent of Bulgaria's trade with developed capitalist countries and 10.13 percent with EEC members. The visible decline in 1982 trade compared to 1980 and 1981 was the consequence of the worsened economic situation, on the one hand, and the fact that a number of large deals were concluded during the year, the execution of and payments for which will occur in 1983 and subsequent years.

Trade and production-technical cooperation and other economic activities between Bulgaria and the individual Benelux countries over the past few years have been as follows:

#### Economic Cooperation With Belgium

Bulgarian-Belgian trade peaked at 111 million leva in 1981. Although it dropped by 20 percent in 1982, Bulgarian exports increased by 8 percent.

In 1982 Belgium accounted for 0.4 percent of Bulgaria's overall trade, or 0.2 percent of its exports and 0.6 percent of its imports, and was in 10th place in our exports to developed capitalist countries and in 9th in imports from this group.

During the past 3 years Bulgarian exports have continued to be characterized by a high share of industrial raw and other materials (metals, chemicals) or light industry goods (textiles, furniture, etc.). Exports of machine building goods were limited.

The principal Bulgarian exports to Belgium in 1982 were the following: thick rolled sheet iron, 26.2 percent; artificial rubber, 5 percent; cheese, 2.9 percent; tobacco, 1.7 percent, etc.

The Korekombel Company, which was set up abroad some 15 years ago, and which is fully owned by the Korekom VTO, plays a main role in the development of Bulgarian exports to Belgium of metals and some consumer goods.

Raw materials and semifinished goods for the chemical (38 percent), tobacco (22.2 percent) and metallurgical (13.6 percent) industries account for the bulk of Bulgaria's imports from Belgium. Imports of industrial diamonds and diamond tools accounted for 6.2 percent.



# Structure of Exports and Imports With Belgium (in %)

Commodity group	1982		1981	
	Exports	Imports	Exp.	Imp.
Machines and equipment	1,0	12,0	1,8	10,0
Raw and other materials	90,4	87,3	84,5	86,5
Food and agri-cult. goods	3,6	0,7	13,7	3,5

The financial and credit policy used also affects the dynamics of imports from Belgium. An agreement on medium-term credits for imports of investment goods from Belgium was concluded between the Bulgarian Foreign Trade Bank and a group of Belgian banks in 1972, subject to annual renewal. A characteristic feature of its application over the past 2 years was the increase in interest rates and a delay in its renewal. This unquestionably had an influence on the volume of machines and equipment imported from Belgium. Some non-customs restrictive measures taken by the Western countries in their trade with socialist Bulgaria are also affecting importation dynamics.

The data on trade between Bulgaria and Belgium in 1972 indicate a considerable negative balance for Bulgaria.

A significant share of the trade between the two countries is by truck. Relations in this area are governed by the 1969 agreement on international trucking. Its implementation is reviewed at annual meetings held between representatives of the ministries of transportation, at which some 500 permits for bilateral and transit haulage are agreed upon and exchanged.

The merchant marine agreement, which was signed and ratified in 1981, plays a major role in the development of trade between the two countries, particularly the transportation of bulk freight, metals and chemicals. "Balkan and Black Sea Shipping," a subsidiary of the agency of the "Water Transport" SO [Economic Trust] was set up in Antwerp in 1975 (headquarters in London, fully owned by the SO), organizes the freight hauled by Bulgarian ships plying the Varna-Hamburg route.

A number of specific contracts were concluded in recent years in the areas of production and technical collaboration and cooperation. A limited contract for production cooperation in the production, assembling and trading of color television sets was concluded between the Phillips-MBLE Company and the Elektroimpeks (now Telekom) VTO (Foreign Trade Organization). A series of talks were held in 1982 and the beginning of 1983 in the course of which agreement was reached on expanding cooperation in the production of color televisions, radio-cassette recorders, household electrical appliances, etc. In recent years the Monsanto Company and the Khimimport VTO have signed several contracts on industrial cooperation as a result of which Agria-Plovdiv is manufacturing the Rouand-ap and Lasogren plant protection chemicals.

The increased possibilities and achievements of Bulgarian engineering organizations in the markets of the developing countries are drawing the attention and interest in cooperating on the part of a number of Belgian firms, such as Sidal, Peter Sime, etc. The Tekhnoeksport and Agrokompleks Foreign Trade Engineering Companies are sought-after partners in building projects in Libya, Syria, Irak, Algeria, and others. Scientific and technical cooperation is also having a certain influence on the condition and prospects for overall economic cooperation between the two countries. It is coordinated by the mixed commission for economic, industrial and scientific and technical cooperation within which a task force has been set to determine the directions and forms of cooperation in this area.

Tourist relations between the Bulgarian People's Republic and the Kingdom of Belgium are traditional. They are regulated by the 1971 agreement on cooperation in tourism. In recent years the flow of tourists from Belgium to Bulgaria has ranged between 7,000 and 9,000 people, 6,000 of whom come in organized tours and account for some 60,000-80,000 sleeping accommodations.

In the organization of group visits to Bulgaria the Balkanturist GD [General Directorate] cooperates with Belgian travel agencies such as Airtour-2000, Sunsnack, Belgatourist, Suncontact, and others.

Publicity weeks, exchange of experience in training tourist travel personnel, etc. are sponsored in order to stimulate the exchange of tourists between the two countries. Possibilities are sought for the joint construction and operation of tourist sites.

#### Economic Relations With The Netherlands

The highest trade with The Netherlands was reached in 1981: 124 million foreign exchange leva, followed by a drop for the reasons we mentioned.

In 1982 The Netherlands accounted for 0.5 percent of Bulgaria's total trade, including 0.4 percent of exports and 0.6 percent of imports. It was in the eighth place in Bulgarian exports to developed capitalist countries and in 12th place in imports from these countries.

Two 38,000-ton colliers were exported to The Netherlands in 1981, which explains the very high share of the "Machines and Equipment" item in the total annual exports.

Contracts for importing major items from Holland were signed in 1981 and 1982: three river tugs, two luxury river passenger boats, machines and equipment for the reconstruction of the ethylene production system in Burgas, etc.

The main commodities exported to The Netherlands in 1982 were alcohol and aldehydes, 5.1 percent; sunflower seed oil, 5.8 percent; rose oil, 3.4 percent; furniture, 2.7 percent, etc. In 1982 Bulgarian foreign trade organizations exported Bulgarian and Dutch goods worth more than 10 million foreign exchange leva through Dutch companies.

Structure of Exports and Imports With The Netherlands (in %)

Commodity group	1981		1982	
	Exports	Imp.	Exp.	Imp.
Machines and equipment	58,9	22,0	3,2	33,8
Raw and other materials	33,0	65,0	77,7	56,4
Food and Agric. products	8,1	22,0	19,1	7,8

The main commodity imports from The Netherlands in 1982 were raw cattle hides, 7.6 percent; pharmaceuticals, 6.1 percent; polyurethanes, 3.0 percent; plant protection chemicals, 3.0 percent, etc.

In 1981 and 1982 contracts were signed and equipment was imported from The Netherlands for the construction of several small and medium-sized food industry enterprises.

Rastem, a Bulgarian company located in Hilversum, The Netherlands, is having a definite positive influence on the development of trade and production cooperation in the chemical industry. The status of the company enables it to engage in a broad variety of commercial operations, which is a prerequisite for the expansion of its activities. The Khimimport VTO is the main stockholder in this company.

Good are hauled to and from Bulgaria to The Netherlands by truck, sea and partially air. Rail haulage is sporadic and subject to international conventions on freight hauling (SIM). An agreement was concluded in 1970 on trucking between the two countries, according to which annual meetings are held by a mixed commission. Every year the two countries exchange 750 permits for bilateral and transit trucking. The 1958 agreement regulates air transports of freight and passengers on the scheduled Sofia- Vienna-Amsterdam air route. Chartered tourist flights are agreed upon annually between the Balkan Bulgarian Civil Aviation SO and KLM. For a variety of reasons no commercial navigation agreement exists between the two countries.

Production and technical cooperation with Dutch companies is developing on a broad basis.

General and limited agreements on economic and trade and technical cooperation have been concluded with leading production and trade companies, such as Phillips, Shell, Phillip Brothers, ACSO, VMF-Stork, Hendrix, Foscamì and others, which some of which considerable trade deals are carried out. Possibilities of joint development in Bulgaria of production facilities and technologies in the fields of electronics, machine building, chemistry, pharmacology, light and food industry, crop growing, animal husbandry and

others are being discussed with them. Several of these and other Dutch companies are subcontractors for Bulgarian engineering organizations such as Tekhnoeksportstroy, Agrokomplekt, Tekhnoeksport, Telekomplekt and others in building telephone exchanges, hospitals, long-distance transmission cables, poultry farms, fodder plants and others in Libya, Syria, Kuwait, and others.

Scientific and technical relations as well influence the dynamics of trade and production cooperation.

The topics, areas and forms of scientific and technical cooperation between Bulgarian and The Netherlands are regulated with the triannual plans for scientific and cultural exchanges and the 1975 protocol signed between the National Agroindustrial Union and the Dutch Ministry of Agriculture and Fishing on cooperation in agriculture. In recent years this protocol has been implemented through long-term specializations, exchange of information and experience and the establishment of contacts for direct cooperation between Bulgarian and Dutch institutes and organizations.

The Dutch are interested in combining the opportunities for sea and mountain tourism in Bulgaria. The popularity of our Black Sea resorts is growing and interest in winter mountain tourism is increasing. The Balkan Holidays mixed tourist travel company -- a branch of the same company owned by Balkanturist in London -- was set up in Amsterdam to handle tourist travel. The company works with the Hint, Verno Raisen, Hotel Plan and other Dutch travel agencies.

In recent years the flow of Dutch tourists to Bulgaria has ranged between 15,000 and 17,000, 9,000 of whom in organized groups, totalling 107,600 tour days in Bulgaria in 1982.

#### Economic Relations With Luxembourg

Trade and economic relations between the two countries are based on the agreements concluded between Bulgaria and the Belgium-Luxembourg economic union (established in 1921). Direct economic relations between the two countries are currently mainly in the field of trade.

The economic relations between Bulgaria and the Benelux countries are profitable to both sides. They have developed and will continue to develop under the influence of the economic situation and the various specific reasons and factors which affect the development of East-West economic relations. The stable development of the Bulgarian People's Republic enables it to continue to develop its future foreign economic relations on the basis of long-term bilateral and multilateral agreements for production-technical and trade assistance and cooperation.

New elements have appeared in the economic situation on the Western markets during the first months of the year: petroleum prices have dropped, interest rates have been unstable and so has the dynamics of orders; the process of concentration and monopolization in the leading Western economic sectors is intensifying. Indications of a new stage reached in the scientific and technical revolution have appeared of late. In a number of areas they will result in basic changes in productive capital and sources of energy and,

hence, the mass renovation of productive capital and a structural reorganization in various economic sectors. These processes presume the appearance of substantial changes in the international division of labor and world trade. It is in this light that the prospects of Bulgaria's foreign economic relations, including those with the Benelux countries, should be considered.

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CSO: 2200/122

PANEL DISCUSSES LOW QUALITY PRODUCTION

Sofia POGLED in Bulgarian 27 Jun 83 p 4

[Panel discussion prepared for print by Ivan Ganve: "One Thousand Against One for the Benefit for Everyone"; date and place of discussion not given; panel participants: Yordan Tankov, deputy chief of the Economics Administration of the People's Militia Directorate, Boris Navokov, public prosecutor at the Prosecutor General's Office of the Bulgarian People's Republic, Dimitur Stoykov, director of the Main Administration of Standards at the State Committee for Science and Technical Progress, Mariya Kamberova, chief specialist at the Main Administration for Standards, Barukh Shamliiev, POGLED's consultant for economic issues]

[Text] [Discussion topic] POGLED's viewpoint on a major national problem--quality: /Why the Production of Low Quality Products Should Be Considered an Antisocial Act/ [in boldface].

[Additional introductory material] "Facts and Questions"

From the Editor's Reception Desk

The apartments at Entrance A of Block 116 of the tenth microdistrict of the Lyulin residential district have not been connected to the sewer system, or it was clogged (just imagine, even the specialists cannot say with certainty!). The apartment block was completed on January 7. The apartments are flooded; the basements are full of silt.

From Readers' Letters

Why are the instructions missing from laundry detergents and soaps produced in Bulgaria?

As far as we know, expensive technology and inks have been imported to stamp the date of production on yogurt. Is there anyone who could read the dates?

From Official Reports

At the State Economic Trust for Wholesale Trade, goods worth millions of leva lie unsold, chiefly due to their poor quality.

The situation in regard to the quality of stereos, tape recorders, and television sets on the domestic market is alarming. At the same time that color television has been introduced all over the world, in Bulgaria there is an emphasis on manufacturing...black and white television sets.

From a Forum at an Administrative Meeting

Our ready-made clothes have won one of the most prestigious names in Europe. But why is there a decline in the quality of fabrics?

From Court Records

The factory for chemical machine building in Pleven has produced 20-ton tanks for storing alkali and acids designated for the Gavril Genov enterprise in Ruse. The welds are not of good quality, despite the fact that the papers are legalized regularly, including the x-ray examinations. Three directors from this enterprise have been found guilty. The amount of damages--250,000 leva.

We offer you a kind of unique fact. There was a claim received not too long ago that Bulgarian made machines had bolts that were not screwed in--every first grader has learned how to do this from his father--But pounded in with a hammer. Naturally--to get the job done more quickly. Since this is a drastic case of a barbarian attitude toward the quality of production and defiance of the regulations for social and work behavior, and of the state's interests, we begin our editorial discussion with it. We want to answer this question: After we have attained certain goals in the solution of the strategic issue of our economy--quality--is it not proper to consider manufacturing low quality products an antisocial and anti-state activity?

Several topics arose during our editorial discussion, topics that explain and prove why manufacturing low quality products is an antisocial activity. It is an elementary truth that poor quality undermines state and social interests. Let us analyze this insidious word, "undermine," with the help of our panelists, let us find its true synonyms in the field of production and economic results.

First conclusion of the panel participants of **/One More Thing About Idolizing Quantity/ [in boldface]**

If the statement that to produce better quality means to produce more and at less cost is logical, then why do so many enterprises bow before His Majesty, Quantity, rather than perfecting their goods?

The main contradiction between society's interests and the petty administrative interests of the producers, as our panelists see it, is in their desire to look for the "many" at any cost, rather than for the "good." According to the representatives from the State Committee for Standards, the reason for this is the lack of a legal regulatory system that would stimulate the enterprises to improve quality and would punish them for low quality. The

economic consequences should directly affect the interests of the culprits. And here in Bulgaria, the sanctions against products that do not comply with the standards are still mostly limited to reducing their factory cost. Now these sanctions are nothing to the producer of low quality (for this he only gets his salary cut, together with everyone else's); he scratches his head, as the saying goes, and carries on in his own way.

Still, let us think a little about this--is it fair to handle someone with kid gloves who thinks that, because our state is a good one and socialism is a humane system, he can escape the most irrevocable civil responsibilities? Is not his very activity antisocial and is not this activity encouraged by the lack of a solid regulatory system?

If, for example, the lifetime of electric light bulbs is doubled, there would be no need for building a new factory for electric light bulbs. Just think how much the state would save in capital investments, construction, equipment, etc.

If fewer licenses are purchased, in all cases in conformity with our conditions, our possibilities, and our raw materials, there would not be failures, as there was, for example, with the license for production of bathroom tiles in Mikhaylovgrad, which POGLED recently covered. Experience shows that an ill considered license policy leads to a waste of hard currency.

During the discussion, it was mentioned that machine building is occupied with winning a K rating for the production of...ice cream bowls and cutlery manufactured by its enterprises. No, it has not shown any desire to certify its basic, determinant manufactures, such as, let us say, electric trucks and machines for digital programmed control. The cutlery is far more impressive and, let us agree, again under our breath, producing it is so much easier. This is an old example, some people will say. And why not an old one, since even certifying bowls and cutlery has dropped of!

We are speaking of the decline in quality from the state plan goals for quality, and not only the small manufactures, but the main, determinant ones. This is a paradox, which conflicts with the contemporary party requirements, and that should be eliminated as soon as possible. Otherwise (we quote an excerpt from the stenographic record) "It is not possible to seek responsibility for compliance with something that has not been assigned."

Second conclusion or /To Condemn the Culprit With a Document/ [in boldface]

In many enterprises the "poor quality corner" is comfortably hidden behind the backs of the workers collective and the collective gets it in the neck in the end. This is not fair, this is not the socialist way.

There is more--this is exactly the nature of an antisocial activity: production of low quality products. Our panelists reported that in developed countries quality is based on the so-called statistical methods of control, which determine exactly, on the basis of a production record, who has manufactured



each part and each tiny screw. Thus, the responsibility is direct and personal. And the control is not only technological, but preventative as well, in the true sense of the word.

We do not have such a control organization here; it requires enormous preliminary work and preparation. But where are we going without it? Shall we again quote the words of Comrade Todor Zhivkov, that there is no place for useless noise and fanfares? Of if we take these words in the concrete context of the topic, personal responsibility, we should give up as soon as possible the empty slogans that everyone should produce only quality products, presuming merely that he would hear us. The participants in the discussion were unanimous: the slogans should be coordinated with a well-constructed and organized system for the so-called preventative control.

It even happens to us, we who sometimes give advice, that we often forget simple truths altogether. Recently, in an otherwise respected publication, an author, cheerfully championing high quality, insisted on /full anonymity/ [in boldface] for the "creator-producer": there was no need to know who produces what. It was enough to know that...he was a Bulgarian. This was a sufficient guarantee and sufficient specification of personal responsibility. The author herself, however, did not forget to sign her name. Let us not forget that we are not going to achieve anything with noisy exclamations and that anonymity in production is one of the most anti-contemporary and anti-scientific approaches that has even been invented. There could not be better cover for the good-for-nothing worker to hide behind.

There is an abundance of cases in which, despite the fact that the blame was not anonymous, it turned out that the people fired for low quality production found another job right away. Specialists warn us: this new job, moreover, is often higher in "quality," that is, in terms of position or rank, and thus more highly paid.

The so-called "letter of reference" was suggested during the discussion, that is, the person who goes to another enterprise, another management, should be given such a document. Well, we can continue to call it the old way--a "letter of evaluation"--but let this evaluation indeed carry a passport for the person's value as a worker, just as there are passports for quality. Because if you give rights to the ill-intentioned person to commit outrages at another enterprise with his debased sense of responsibility, what service are you rendering to society and to yourself as well? Are not those who sign such evaluations thinking that they do not have the right to complain if their shoes feel tight, if the ceilings of the prefabricated apartments leak, and the bulbs under the lampshades burn out every other night? They also have their own part in this vicious circle.

Third conclusion or /The Simple Estimation of What Is More Worth Doing/ [in boldface]

What would benefit society more? Should we put all our efforts into preventing poor quality, or should we use sanctions against already manufactured low quality products?

The result of this reckoning would certainly be a thousand to one in favor of the former choice. No one could restore to the state the wasted resources, invested labor, material and moral damage, our panelists emphasized this point.

Last year, the General Inspectorate at the Ministry of Internal Trade and Services prevented the sale and purchase of goods worth more than 66 million leva, out of a total amount of goods received at a value of 6 billion leva. It is another matter why the "watchful eyes" caught so little; try to draw the conclusion for yourself; what does it really matter whether the goods would be stopped on the way to the stores' shelves or, if the favorable conditions are not available, they should not have seen the light of day in the first place.

"But what about fines?" someone would ask. "But what about sanctions, what about legal prosecution?"

This someone was not, however, among the participants in the discussion. Because they were unanimous: even if the culprit were to be fined 300 or 600 leva, it is all the same: the losses, in most cases, amount to millions of leva. And the devaluation of fines prompts us to accept the truth of what people say: "Lock the barn door after the horse has been stolen." Because at the General Inspectorate for Standards, no one can recall a case in which someone had paid the fine out of his pocket. Not that he does not pay it at all--on the contrary. But there is always compensation afterwards, a reward or something similar.

And now, a quotation from the Penal Code (Article 228, paragraph 1):

"If a manager or control authority orders or allows the production of poor quality, nonstandard or incomplete industrial products, which do not comply with the determined requirements for quality, type or characteristics, he commits a crime and is sentenced to prison for 3 years, or to corrective labor."

The quotation is a good one. There is no arguing about the definition that manufacturing low quality products is an antisocial activity, the legislators have used an even stronger term for it: **/Crime./** [in boldface]

The quotation is a good one, the bad thing, though, is that it is applied very little in judicial practice. You can count the number of cases against culprits on your fingers. Of course, we have to keep in mind that this crime is also intertwined with other economic crimes, and looking for responsibility proceeds according to a different text from the Penal Code, which puts it in stronger terms. But statistics do not matter. The most important thing is, as was stressed during the discussion, that there should be stronger interaction between the three basic links authorized by law: the control authority for quality, the preliminary production authority, and the prosecutor's office.

But will the criminal authorities solve the problem of quality? It is absurd to imagine that. Is it possible to "complete" each working place with an

operative worker, examining magistrate, and prosecutor? Could these authorities substitute for the day to day work of the people whose task it is to ensure high quality?

Neither the sanctions nor the big stick will solve the problem--everyone agreed on this. Fighting with liberalism, with kind-heartedness will solve it, together with synchronizing the interests of each producer with the state's interests.

Finally, as usual for POGLED in this kind of discussion, we asked the panelists to point out, in one sentence, some of the decisive factors for abolishing the social danger caused by the production of low quality products.

Yordan Tankov: First of all, to prevent the appearance of such products, instead of punishing afterwards.

Boris Novakov: To perceive truly the necessity which had urged the legislators to raise the production of poor quality to a crime.

Dimitur Stoykov: The planned goals in regard to quality should become an inseparable part of the state plan.

Mariya Kamberova: Control should not be only "final control," that is, verification should not be practiced only after the product has been manufactured, and then leave it up to luck, control should indeed be preventative.

Barukh Shamliiev: Responsibility should be organized in such a manner that enterprises would always find it more profitable to manufacture, in all cases, only first-rate products.

Editor's note: Since the topic of why manufacturing low quality products should be considered an antisocial activity is current and is on the agenda of our socioeconomic development, it will continue to be POGLED's point of view when covering this major national problem, i.e. the problem of quality. In this connection, we remind our readers to please send us or let us know about your "exhibits" for the window display of low quality goods which POGLED will soon arrange, again in order to analyze the causes for production of such items.

12334  
CSO: 2200/119

LARGE SCALE THEFTS FROM GOODS TRAINS EXPOSED

Sofia TRUD in Bulgarian 8 Jul 83 p 2

[Article by Valeri Vedov, TRUD correspondent: "Thieves . . . with an Irreproachable Record"]

[Text] The railway workers' case -- that is how the people in the town of Mezdra call a district court trial that has lasted almost two weeks. The proceedings have been commented upon everywhere, many have wanted to follow the trial at close proximity. The reverberations of Case Number 200/83 have not yet died away.

It does not happen every day that we see twenty six defendants in a courtroom. With a few exceptions, they were all people born between 1950 and 1959. The main group consists of engineers and assistant engineers at the Nikola Kolarov Electric Locomotive Depot in Sofia, Mezdra section. People into whose hands a great number of freight trains on the Sofia - Gorna Oryakhovitsa line were entrusted.

These people see their responsibility in a rather peculiar way. They begin to steal various goods from the cars they transport. They take advantage of their official position and the right to move freely around the trains (and who would be suspicious of a man wearing a railway uniform?), and they begin to open sealed cars and containers with impunity.

In the course of time, the engineers and their assistants work out their own style of stealing and even a special system of signals to warn of unwanted witnesses. They begin to equip their autos with stolen, foreign tires from the automobiles they transport, with spare parts and radios. What they do later on could not be described in terms other than plundering, all down the line, everything they can get hold of -- cartons of cigarettes, beverages, tools, tape recorders, oranges, underwear. . . . The list is rather long, and after it was heard by the people in the courtroom, they exclaimed: "Pillferers' affair! . . ."

And here is an excerpt from the indictment: "In some cases the defendants had destroyed partitions that were solidly built to protect containers and boxes, they had forcefully opened car doors and trunks in order to steal tires, tools, radios, and different spare parts."

Naturally, we ask ourselves: why has the theft not been discovered for so many years? Only because the depot's management had trusted its employees and workers? This is quite natural -- hundreds of trains, carrying thousands of tons with various loads, travel every day on the railway arteries of the country, but not every engineer would dare to reach out to take the socialist property he is responsible for. This is a temptation conceived of only by people with little conscience. Here again we come upon something already painfully familiar. Most of the defendants have perfect records, they have received awards. However, it is obvious that something has gone on, unnoticed by the depot's management. Besides, one of the main defendants in the case, Valeri Shopov, had been convicted several times before he began working as an engineer. And this was not an argument when he was appointed to an official position with great responsibility! But the causes are not hidden only here.

The circumstances that helped the theft have their roots in the very system of transporting loads on the Bulgarian State Railways. Numerous and expensive loads are transported, but not enough has been done to ensure their storage and to protect them from theft. It has been said repeatedly that the present way of sealing cars is not the most reliable. Until 1975, each freight train used to have a trainmaster who bore the responsibility for the loads and kept the papers that went along with them. The cutback in these positions has "cut back" on responsibility as well -- the engineers are only supposed to transport the loads to a certain station and to deliver the necessary papers. For the irresponsible, this indeed becomes an unrestrained field for getting rich illegally.

There was no active control during transportation and storage of the loads as well. In the Mezdra section of the Nikola Kolarov depot, where one hundred and thirty people work, there is only one general leader (station master), who, even if he had such functions, could not check and give instructions to all the locomotive teams. No one had checked on the engineers' unjustified stops between stations, when they were hiding stolen goods and items.

The group, made up of eight people, also begins to steal items that go far beyond their "needs," that is why they look for accomplices and fences. And they find what they are looking for, people in different professions, but all similarly in bondage to a misunderstood friendship, people who hide or sell the goods stolen from the cars. During the trial they were defendants for the most part, and most of them believed that their guilt was lesser than of those directly involved in the thefts. However, their guilt would not have existed at all if they had stopped the criminal activity of their eight friends in time, if they did not believe, like them, they would not be punished. Perhaps some of them indeed have a good reason. The three bartenders, summoned by the court, who sold all the stolen cigarettes, beverages, and other goods, continue to work, undisturbed by anyone. They also presented irreproachable records, provided for them by the trade organization. . . .

Perhaps the management of the electric locomotive depot and of the Bulgarian State Railways Economic Trust does not have anything to say about the conclusions from this case, since the court's requests for a public prosecutor have remained unanswered? This lack of interest is not surprising in the least, since the huge damages which the railroads have incurred during transport are well known.

DEPUTY MINISTER VIEWS INNOVATIONS IN HEAVY INDUSTRY

Prague HOSPODARSKE NOVINY in Czech 8 Jul 83 pp 1, 5

[Article by Prof Eng Zdenek Prusa, Doctor of Science, deputy minister, Ministry of Metallurgy and Heavy Engineering of the CSSR: "More Innovational Activity"]

[Text] The reason for the exceptional, concentrated attention being currently devoted by party organs to the accelerated utilization of research and development [R&D] is that this is currently the main source for increasing not only production but also labor productivity. The report of the CPCZ Central Committee Presidium delivered at the Eighth CPCZ Central Committee Plenum, along with the resolution of this plenum, formulates comprehensively the objectives that must be met in terms of basic approaches and implementational details, including the critical paths leading to their fulfillment.

This basic position paper must be broken down now at all levels, including factories, into a system of ongoing measures which will exert a definite influence on production processes. It will not suffice, however, to merely break down this new strategy, even in an ideal fashion. We must get a commitment to meet these objectives from everyone who can exert an influence on the final outcome, because success in this is, in the final analysis, their responsibility.

One of the major turnarounds in attitudes must be a realization that extensive development strategies for metallurgical works and heavy engineering are not only exhausted, but are in fact detrimental to our entire national economy.

We have been expounding on this theme at conferences with general and enterprise directors, professional managers, with work groups and assemblies in enterprises and at factories. So far there has not been a single person who has disagreed with us. Nevertheless, instances very often arise of inertia in adhering to previous extensive tendencies. This appears repeatedly during negotiations regarding production plans, investment and import strategies. It is my opinion that the cause of this frequently repeated phenomenon is not a lack of understanding of

the necessity for a shift to intensive development of production processes, but either perplexity as to how to manage such intensive processes, or a lack of desire to work under new, much more rigorous conditions. This situation is very closely connected with the reluctance of some managerial employees to make decisions regarding the utilization of R&D findings in conjunction with product innovations.

The accustomed routines of adversarial managerial practices at all levels has in many instances caused a loss in the individual authority and responsibility of senior managerial employees. It is often the case that when seeking the reasons for success or failure we are unable to determine the decisive factors involved because of confusion in conflicting comments and evaluations. For these reasons, it would be very appropriate to simplify the system of adversarial management, and to completely eliminate it in some instances, leaving the responsibility for decisionmaking directly with the appropriate senior managerial employee.

The need for increasing the attentiveness and responsibility of senior managerial employees for the method and impact of the utilization of R&D findings must become immediately evident in an end to the still existing practice of considering the application of R&D findings to be strictly a matter for professional technicians. The specific responsibility to society of people working in the R&D sector was also emphasized by the Eighth CPCZ Central Committee Plenum. This plenum also emphasized the responsibilities of all other employees, such as economists, production managers, businessmen, suppliers and several other professions. Experience to date indicate that it is precisely these employees who remain far behind in relation to what they could be doing to assist in the implementation of R&D findings.

A similar practice which seriously damages attempts to implement R&D results rapidly and effectively is often deeply rooted in inter-enterprise and intersectorial relations. It is a manifestation of a consumer-oriented approach and takes several forms, ranging from unrealistic demands in terms of materials and schedules, to the exaggeration of normal and usually minor shortcomings of prototypes while at the same time denigrating their advantages, even to the point of implementing the production of completely untested assemblies and technologies, or of new products with poorer performance characteristics. A common characteristic of this consumer-oriented attitude is to demand everything thoughtlessly and do nothing, except make demands, to assist in R&D work. One encounters the practical consequences of this, for instance, when demands are submitted for expensive investment projects of the highest possible technical sophistication which, after their implementation, the operator is not even able to use properly, leading to a sharp decline in the efficiency of the factory or operation. Moreover, in such cases the main means to the achievement of increased technical sophistication has remained unused, i.e., reconstruction and modernization.

These are pressing problems within our sector. Among their manifestations are the periodically repeated discussions of the social standing, number and compensation of creative technicians, designers and technologists. How is one to explain the fact that in certain enterprises and factories the number of creative technicians is declining while the total number of technicians is increasing? Or the reality that qualified creative technicians often leave to work in other areas only so that they can obtain better wage conditions? The clear explanation for these conflicting trends is the improper practical implementation of policy by the management of factories with these problems. The basic social conditions for the attitudinal and material evaluation of creative technicians have been in force, after all, for a long time, but have been implemented only weakly.

The managements of our VHJ [Economic Production Units] and enterprises now face the task of evaluating their approaches to the application of R&D findings and reevaluating their innovational objectives. Given these goals, it seems to me appropriate to call attention to several well-established experiences:

--Rapidly implemented, purposeful product and technological innovations are vitally necessary for success in all sectors. Only under these conditions will we be able to keep pace with world producers and achieve the desired economic results.

--The most effective motivator for innovation and at the same time an objective criterion of success or failure is exporting.

--Innovational activity has a future and brings positive economic affects only if senior enterprise management devotes attention and assistance to it.

--The speed and technical scope of innovation depends to a certain extent on the size of an enterprise. The most active are middle-sized producers, those with 1,000-2,000 employees. Small enterprises have enough flexibility but suffer as a result from limited resources. Large enterprises sometimes suffer from too much bureaucracy which leads to lost time.

--In engineering enterprises, from 2 to 4 percent of the value of production is spent on technical development. This is an adequate volume over the long term. However, what is critical is not how much is spent on technical development, but rather how effectively these resources are utilized.

--Sixty percent of the technical suggestions for appropriate innovation are generated by the activity of the technicians of the production enterprise, 38 percent are obtained by comparisons with the market and reactions to consumer comments, with the remaining 2 percent coming from the outside.



--Good planning of the development and production of new products does not guarantee by a long shot that they will be marketed successfully. The saleability of goods depends to a great extent on timeliness, the method of marketing, and the quality of sales and postsale servicing.

--The most successful way to innovate successfully is to merge the interests of the marketing and developmental divisions of an enterprise.

--The obtaining of information serving to optimize the specification of parameters for an innovative product can save 10-30 percent of the development costs and, more importantly, can save much valuable time.

--The most important innovations (perhaps 20 percent of the total) are managed and evaluated by senior managerial personnel of an enterprise of VHJ. The implementation of a given innovation should be decided upon in principle by the appropriate director or general director.

--Enterprise and VHJ management must make rapid and professional decisions in instances where innovational activity is weak, making it impossible to utilize fully the production base, or when it is so strong that its full implementation is not possible given the existing production possibilities. If it is weak, then either steps must be taken to strengthen it or consideration must be given to purchasing a license. Where there is a high level of innovational activity, it is not proper to hold it back while conserving the achieved level of technical sophistication. Rather, production possibilities must be expanded, or effective cooperation sought, even to the point of selling an active license.

Some of the foregoing experiences and characteristics which determine every innovational process and which are even more complex in R&D and production practice (because here one must take account of legislative, wage, financial and other considerations), lead to an important conclusion:

We must evaluate innovational activity and its effectiveness not only comprehensively, but also paying particular attention to economics and the future of a given enterprise of VHJ. There are well-known instances when innovation "at any price" has been ineffective and instead of strengthening the economy have succeeded only in weakening it. A clear example is provided by those cases in which preferential pricing has been applied to a certain product domestically, while the prices received on world markets have been relatively low.

While in the initial year of the Sixth 5-Year Plan (1976), new products in the metallurgy and heavy engineering sector accounted for 11 percent of total production value, in 1980 they accounted for 14 percent of this value. And although the actual growth rate of new product production is more significant than that for overall production, the results achieved to date may not be considered as satisfactory. The results of the Sixth 5-Year Plan, while significant in and of themselves cannot be considered to have completely met the needs of our society and, in my opinion, in no way at all corresponded to the potential which we possess.

Analyses of innovative products in terms of their technical sophistication in the Sixth 5-Year Plan indicate that in the initial year of this 5-Year plan (1976) innovative products accounted for 4.7 percent of all the goods produced by enterprises throughout the national economy, 3.5 percent of our total economic production, but only 1 percent of all products on the CEMA market, and only 0.2 percent of all products on world markets for freely exchangeable currencies. In our sector for the same year, this indicator displayed somewhat better values, even though they had the same declining trend, as follows: 5.6 percent of total enterprise production, 4.8 percent of nationwide production, 2.2 percent of CEMA production and 0.6 percent of world production.

In the final year of the Sixth 5-Year Plan (1980), our sector displayed the following series of values regarding its share of innovative products: 6.0 percent, 6.0 percent, 2.9 percent, 0.5 percent. These numbers may be interpreted as being indicative of a gradual increase in innovative activity, as well as of the increase in the rigorousness of the world market for technically sophisticated products. Innovational activity in our sector, expressed in terms of innovative production as a percentage of the total production of goods may be considered to have been constant over the period under discussion at the nationwide, CEMA and world levels, and in comparison with activity in the Czechoslovak national economy as a whole.

This favorable outcome in terms of domestic relations must, however, be subjected to some specific criticism. Analyses have confirmed the existence of significant underutilized capacity in sectorial innovational activity, because the total volume of production of innovative products in the first year of the Sixth 5-Year Plan (1976) was composed of fully 48 percent goods of the 4th innovational category, 40 percent goods in the 5th category, 11 percent from the 6th and only 0.7 percent from the 7th innovational category. On the other hand, the production of innovative products in the entire national economy contained 51.5 percent from the 4th category, but fully 16.6 percent from the 6th and 1.4 percent from the 7th, highest category, a result that doubled the value of the identical indicator in our sector. In 1980, the structure of innovative products by category in our sector was even less favorable, with 4th category innovations having increased to 56 percent of the total, or 8 points in comparison with 1976, while 5th category innovations had declined 7 points to 33 percent of the total, with 6th and 7th category innovations remaining basically unchanged from the base year at 10.3 percent and 0.8 percent respectively. For completeness in the comparison and evaluation of the evolution of innovational activity and its rate of growth, it should be mentioned that on a nationwide basis innovations of the 4th, i.e., the lowest category of those being monitored, increased to 67 percent of the total, or by 16 points. This figure is substantially higher than the one turned in by our sector. There was a decline of 5th category innovations to 20.8 percent of the total, of 6th category innovations to 10.8 percent (6 points), and 7th category innovations declined to 1.0 percent of the total, which is still a better performance than that turned in by our sector.

In terms of the branch structure of our sector, new products represented almost 23 percent of the total value of production at engineering VHJ in the first year of the Sixth 5-Year Plan and increased to 26 percent by 1980, with an average for the 5-year plan of 25 percent. In metallurgical VHJ, this percentage increased from 3.5 percent in 1976 to 5.7 percent in the final year of the Sixth 5-Year Plan, with an average value of 4.9 percent, and with the average in ferrous metallurgy being 4.1 percent. The low percentage values in the metallurgical sector are caused by the fact that metallurgical VHJ produce products according to CSN [Czechoslovak State Standards], and innovations here are primarily technological.

Today there can no longer be any doubt about whether specificity of objectives or the introduction of a system for managing innovations is the more important for stimulating innovational activity. Both are important and essential, one makes no sense without the other. Specificity and a system must supplement each other and reinforce each other.

Therefore, the principles of a management philosophy for innovational processes in our sector must be based on a retention of a continuity between predictions, a long-term view and the middle-term plan for R&D. Its purpose is to exert a systematic influence on our VHJ and enterprises with a reciprocal link to the resource capabilities of the entire sector. The mechanism which has been used to manage the innovational process is "The Information System for Innovations and Innovational Programs," which was adopted by our sector as Measure No 31/1981. An innovational program represents the preplan stage of a middle-range plan for R&D for sectorially managed VHJ and organizations, from which is spun off middle-range and sometimes even annual implementational plans for R&D tied to the remaining parts of the plan. The actual innovational program is formulated in terms of specific critical innovations which are monitored and evaluated in terms of their technicoeconomic parameters from the time of the beginning of research right through the utilization phase.

The problem of documentation and the formulation of an extensive data base for the information that is essential for evaluations, decisionmaking and management of the innovational process is being solved by computer technology applied both at the sectorial level and at basic levels of management. A preliminarily implemented innovational data base, transferred to an interactive display system, serves not only the actual decisionmaking and administrative processes, but also all professionally interested divisions--production, economic and commercial. This opens the possibility that the planning and management of R&D can become not only a component of the planning of national economic development, but that it can also be a source of much important information.

Another aspect of innovational activity is its resource-intensiveness. The determination of the relationship between contributions and demands as a subject of planning and management of the entire innovational process (and the efficient allocation of resources) may be conducted effectively only with the use of computer technology.

In practice, no information system can monitor the full extent of the innovational process. Such systems, therefore, are focused on the critical areas of metallurgical and engineering production (about 90 percent of total volume) which represent the main sources for influencing the consumption of raw materials, other inputs and energy, in which are concentrated the primary investment and labor-intensiveness, and which represent fundamental contributions to society in terms of their innovational impact. In other words, the system covers those areas which are of critical structural importance for the development of the entire sector.

Innovational pressure oriented toward these critical innovations also calls attention, however, to the need to provide innovations with a short-term developmental period and production start up schedule, and which furthermore are not resource-intensive. These are the ones which often have a great economic impact because they are so numerous, and which are, in any case, essential in a comprehensively conceived innovational process.

Management of the innovational process, organized based on the experiences of more than 3 preceeding years of verification, is influencing the intensification of this economic sector in the current 5-year plan. Its importance will clearly increase in the future. Currently, it is directed at the realization of more than 470 basic innovational objectives in 99 of the production divisions of our sector. The practical outcome of efforts to date has been an increase in innovational activity this year of 65 percent in comparison with 1981 when the new system was implemented.

In terms of importance, the greatest percentage of innovational activity in the heavy engineering sector is taking place at the VHJ of CKD [Cesko-Moravska-Kolben-Danek] in Prague, Chepos, Vitkovice, Skoda and Sigma, i.e., organizations whose production programs are taking care of a major part of the developmental objectives of the fuel and energy generation, metallurgical, chemical-foodstuff, and transportation complexes. This statement in no way is meant to belittle the importance of innovation programs at other VHJ.

The results of an evaluation of the course of innovational processes in the heavy engineering sector display positive trends in the conservation of fuels, energy and materials during production. Technicoeconomic parameters comparable with world standards are being achieved, and in some cases we are achieving state-of-the-art performance. Fuel, energy and material savings during operation and the export impact of these products, particularly on exports to nonsocialist countries, are substantial. The major innovative products of the heavy engineering sector alone will account by 1985 for materials savings of Kcs 271 million and energy savings of Kcs 15.1 million annually, with these savings projected to increase by 1990 to Kcs 480 million in materials and Kcs 71 million in energy savings. These values take into account inflationary influences and the shift to the use of higher quality

materials and energy. On the other hand, however, implementing these savings will require, during the Seventh and Eighty 5-year plans, the expenditure of Kcs 8.7 billion in investment resources and another Kcs 6.8 billion in noninvestment resources on R&D. Even so, the tradeoff between these demands on resources and the impact to be achieved is a clearly positive one. Innovative processes integrated into heavy engineering products also favorably influence the growth of labor productivity for the user, since a higher level of automation is involved.

An evaluation of the results to date of the innovational system in the heavy engineering sector has contributed to the discovery, specification and quantification of certain important phenomena which exert a negative influence on the comprehensive assurance of innovative processes. This especially concerns the low numbers and sophistication of innovations of a technical character. Even though technical innovations are a very important source of material and energy savings and a source of increased labor productivity, they account for only about 10 percent of all improvements in these areas. The need to introduce nontraditional, highly efficient technologies in the fields of welding, forming, turning, casting, surface finishing and assembly is not as yet being respected. These technologies have either existed for a number of years or are being worked on by the leading world producers, on the basis of new findings in physical chemistry and biology. Employees at the preproduction stages, which are the weak link in the research, development and production cycle in our sector, especially in the area of the technical preparations for production, remain behind in this area.

Innovational process and quality are also slowed down by subcontracted deliveries for heavy engineering. The problem rests with deliveries of highly sophisticated assembly materials and electrical equipment, especially that employin microelectronics, controlling regulating and monitoring technology. To cover the needs for the main innovative products in the heavy engineering sector, there is having to be "invited innovation" in the cases of more than 300 subcomponents with 34 percent of this achievable within our sector, 25 percent of its the responsibility of the general engineering sector, 15 percent under the jurisdiction of the Ministry of the Electrotechnical Industry, and the remaining 26 percent dependent on the innovational activity of branches under the jurisdiction of the CSR and SSR ministries of industry.

This inadequately resolved problem of the innovative character of subcontracted components is one of the reasons that import demands have declined so little. Nor may one ignore the fact that for the present the length of the innovational cycle from the beginning of research on an innovation through its first actual use continues to fail to meet the requirements for accelerating the intensification of the national economy, averaging 5-7 years. At the same time, one must not overlook the low level of participation in integrated international R&D and production cooperation of the CEMA countries, which substantially influences the innovational processes and the role of R&D progress in these countries.

The Eighth CPCZ Central Committee Plenum took note of the positive results that have been achieved, but also critically analyzed the accumulated problems of the R&D effort. It placed its greatest emphasis on the improved economic performance of every industrial branch, which will force attention to be given to the implementation of scientific and technical findings and requests to be made for them.

The experiences of our sector in the building of a practical as well as methodological system for managing the innovational process confirm its practical applicability and vitality. Now our task is to develop supplementary measures to add to it that will make it possible to give full expression to R&D progress both in internal production, domestic utilization and international exchange at a qualitatively higher level and over shorter time schedules. It is important that all the professional divisions of the ministry and its organizations participate fully and with full responsibility in the preparation of these measures, so that their functional participation be unambiguous and binding. We will consider the practical usability of these efforts to be crucial, i.e., their material and temporal linking to all types of plans, as required in the thesis concerning "the axle."

We are aware that the best of systems loses its significance and effectiveness if it does not allow for sophisticated problem solving. We are, therefore, considering the future possibilities in research and production for our sector. This will take the form primarily of intensified innovational activity in the introduction of new and progressive technologies, as well as a strengthening of the roles of the pre-production stages--design and technology--the introduction of modern computational and representational techniques into design and technological divisions, the improved outfitting of R&D divisions with prototype workshops and testing facilities, improving the personnel qualifications in R&D, and the provision of material and social recognition for outstanding performance.

In modern technology, the development of a components base and of applied electronics also has its place. These intensificational factors have so far not been adequately present in the innovational process. For this reason, a further objective for the near future is the building of workplaces for applied electronics, to compensate for the ineffective and less robust programs of that sector.

In conclusion, I would like to comment that without a system for critical innovations organized and interrelated on a nationwide basis, at least at the level of industrial branches, the decisive intensificational influence of R&D progress cannot be utilized. At the same time, no system reduces the importance of innovations produced by the focusing of the activities of the inventors and improvers movement, rationalization brigades and worker initiative. There can be no intensification of the national economy without them. Practice shows that the efficiency of these initiative-based innovations is in certain instance, if the opportunity is left open for their introduction, at the same level of importance as the planned management of the innovational process. The creation of better conditions for the implementation of this type of innovation is also one of the management objectives in our sector.

ECONOMIC RESEARCH IMPROVEMENTS TO IMPROVE R&D APPLICATIONS

Prague HOSPODARSKE NOVINY in Czech 8 Jul 83 p 3

[Article by hn: "Measures To Improve the Quality of Applied Economic Research"]

[Text] In the report of the CPCZ Central Committee Presidium on the acceleration of the practical applications of research and development [R&D], it is stated that "the current situation demands an increase in the quality of the efforts of applied economic research and the effective practical utilization of its findings," and that the CPCZ Central Committee Presidium and the government have adopted the appropriate programmatic, personnel and organizational measures in this area. These measures were decided upon on 2 and 3 June, and find their concrete expression in CSSR Government Presidium Resolution No 112. This article is about the contents of these measures.

A fundamental precondition for increasing the quality of applied economic research is first of all to make more precise its programmatic focus, as established for a 10-15 year period in the 1974 long-range program for economic research, in view of the new and more complex domestic and foreign conditions of economic development.

Making the Programmatic Focus More Precise

With regard to the long range socioeconomic development requirements of the Czechoslovak national economy, the subjects for applied economic research have been divided into six sectors which are to become the thematic base for six future programs of economic research, and to which will also be adapted a new structure for a basic network of research facilities. The six sectors are:

1. research on the scientific development of the Czechoslovak national economy, with particular attention to macroeconomic proportions, internal and external equilibrium, the rate of economic growth, its sources and factors, efficiency and intensification, as well as problems of the optimization of structural changes;

2. research on the problems of the planned management of the Czechoslovak national economy, with particular attention to the conceptualization of the nature of the planned management system, the assurance of the inter-relationships and compatibility between individual mechanisms (elements) of planned management and their areas of application, the impact of the planned management system on efficiency, intensification, and the planned character of economic development;

3. research on the human factor as both the objective of and a source of socioeconomic development, with particular attention to problems of living standards and the aspects of social development, and the problem of the human being as a component of the forces of production;

4. research on foreign economic relations within the process of the development of the international division of labor and socialist economic integration, with particular attention to relationships of economic and R&D cooperation, direct production relationships, as well as foreign commercial relationships and research on the external conditions for incorporating the Czechoslovak economy into the international division of labor;

5. research on scientific and technical development, with particular attention to its role as the main factor in intensification and increasing efficiency, its principal areas of concentration and their consequences for the development of the forces of production, production relationships and their management;

6. research on socioeconomic information and managerial automation, with particular attention to improving the resources for integration, management and the effective utilization of information systems and developmental trends in the application of automation to management.

The above six subject areas for applied economic research are not of the same type. The first two sectors differ substantially from the final four, in the sense that their content places them in a more elevated position, since they encompass the final four areas in an aggregative way from the viewpoint of the planned management of the national economy. In this regard, the final four sectors may be described as priority cross sectional groupings of research problems.

A critical precondition for improving the actual types of activity of applied economic research is to carry out a thorough changeover to a synthetically comprehensive type of problem solving obtained through conceptually executed coordination in all phases of research activity.

An interdisciplinary approach will be applied to the solution of crucial scientific research problems (the utilization of the findings of applied and basic research, of the natural, technical, economic and other social sciences).



State programs of economic research will constitute the basic horizontal structure of the state plan for economic research, will have a long-range character, and will be the framework for assuring the long-range objectives of applied economic research. In their concentrated form, they will cover the entire field of applied economic research.

The vertical structure of the state plan for economic research will continue to be made up of crucial priority and specific tasks, which will be components of 5-year economic research plans and of the pertinent implementational plans. Determination of the appropriateness of including specific types of tasks in a plan, the operational evaluation of techniques and outcomes of problem solving, the proposal of changes in the focus of tasks during their resolution, and the final evaluation of research results will all take place under a simplified methodology.

This newly conceived form for the basic implementational results of research, which is directed at qualitative change in the utilization of its positive results in the public sphere, implies a substantial improvement in the work of applied economic research in terms of final results. The basic forms of implementational outputs will be priority projects and research reports, which will be supplemented by additional implementational outputs of lesser significance and of various kinds.

Priority projects will be the most important form of implementational output of this R&D activity. They will assume the form of materially and temporarily limited aggregative implementational outputs at the level of individual state programs for economic research; they will, therefore, constitute a critical contribution by research to the preparation of resolutions of a programmatic character by the highest party organs and those with strategic importance for the preparation of conceptual planning documents and for prognosticative activity. The formulation of priority projects in the organs themselves will be linked to the evaluation of applied economic research as a whole, in terms of its contribution to the resolution of conceptual issues of the socioeconomic development of society.

To test the process for shifting to priority projects (which should begin in 1984), four experimental priority projects are being conducted in 1983 which are related to four of the six above-mentioned research sectors. In view of their short duration, these projects will more or less reflect the current level of comprehension of problems by applied economic research. It is expected that in the next stage these will change into priority projects with more precise content and more refined implementational structure, with completion schedules tied to the end of the Seventh 5-Year Plan. At the same time, they will be supplemented with two additional priority projects related to those sectorial areas of research which so far have not been covered by experimental priority projects, i.e., to the R&D sector and the socioeconomic information and management automation sector.

Applied economic research will also contribute to a much greater extent than previously to the preparation of foundations for the adoption of individual, specific and more important national economic decisions. This function will be served by the second basic form of implementational outputs from research--research reports. These will be ordered several months in advance and will be among the bases for the discussion of national economic problems in political or governmental organs. The themes specified for the reports will be included in the annual plan for applied economic research as specific research tasks with the understanding that the reports will be compiled in the requisite comprehensive manner, and in the concise and practical form of specific suggestions and conclusions accompanied by basic scientific documentation.

#### Rationalization of the Facility Network

The successful implementation of these measures is directly dependent on more efficient organization of the network of applied economic research facilities. An increase in the sophistication of their management is likewise a condition for implementing the concentration of research on the resolution of crucial national economic problems. With this objective in mind, research centers are being set up within the network of applied economic research facilities, as budgetary organizations subordinate to selected federal central organs of the state administration. There are five such centers:

--the Central Institute for National Economic Research (The State Planning Commission). This institute will be responsible for the objectives of the first and second above-mentioned sectors of research activity, i.e., for both of the umbrella areas of research. For this reason, it will also provide the requisite coordination and content links to all the other sectors;

--the Research Institute for Social Development and Labor (Federal Ministry of Labor and Social Affairs) will have responsibility for the third sector;

--the Research Institute for External Relations (Federal Ministry of Foreign Trade) will have responsibility for the fourth area of activity;

--the Research Institute for Scientific and Technical Development (Federal Ministry for Technical and Investment Development) will be responsible for the fifth sector of activity;

--the Research Institute for Socioeconomic Information and Management Automation (Federal Statistical Office) will be responsible for the sixth sector of activity.

Regarding the internal subordination of the research centers, a general principle is being established that they will be directly managed by the chief of the pertinent central organ, with the directors of the centers themselves serving as members of an advisory committee.

These research centers will occupy a senior position in the network of applied economic research facilities as well as within the framework of the state plan for economic research, and will perform the function of the main coordinating facility of the given sector. All the centers will have a broader thematic mandate than the activity and influence of the sector which administers them, and will be run according to the state plan for economic research as approved by the CSSR Government.

In view of this change in coordinational functions, during 1984 there will be a transfer of responsibilities to the research centers from nine current state programs of economic research. Preparations will also be made for shifting them to six newly conceived programs (which will be identical in terms of content to the above-mentioned six research sectors).

In conjunction with the establishment of these research centers, which will begin their activities as of 1 January 1984, and with other rationalization measures, also as of this date 10 existing institutes will cease to function, namely:

- the Research Institute for National Economic Planning and Management (VUPR);
- Research Institute on the Standard of Living (VUZU);
- Institute for Measurement Techniques of the State Planning Commission (UVT SPK);
- Research Institute for the Finance and Credit System (VUFUS);
- Czechoslovak Research Institute for Labor and Social Affairs (CSVUPSV);
- Institute for the Economics and Management of Scientific and Technical Development (UVTR);
- Research Institute for Prices (VUC);
- Research Institute for Foreign Trade (VUZO);
- Research Institute for Socioeconomic Information (UVSEI);
- Research Center for Information Processing and Calculations (VVS).

Separate rationalization measures will also be carried out at branch institutes. These will be directed at completing the changeover of these institutes to either economic or contribution-supported organizations as well as other isolated modifications. These organizations continue to represent, in addition to the research centers, a second component of the network of facilities for applied economic research. At the same time however, a portion of their research capabilities will be transferred (assigned) to the research centers.

The rationalization of the network of applied economic research facilities subordinate to the central organs of the CSR and SSR governments will be carried out according to the decisions of these governments, under the same principles as those applying to federally administered research institutes.

The rationalization of the network of applied economic research facilities, and especially the establishment of the research centers, will have the result of strengthening the concentration of research and coordinating activities, and therefore also will create more favorable conditions for the generation of implementational outputs of a synthetic character in the form of priority projects and research reports. This will also provide for more efficient practical implementation of research findings.

The creation of five centers of applied economic research and their staffing will be accomplished primarily by shifting employees from the current R&D base as well as by hiring new employees.

#### The Economic Research Council

The CSSR Economic Research Council (REV) has been conceptualized as an advisory, initiative-taking and coordinating organ of the CSSR government whose objective is primarily to prepare and monitor the plan for applied economic research within the framework of the state plan for economic research, coordinate the process of implementing the state plan for economic research, and coordinate all phases of research.

The position of the REV derives from the fact that the objectives of the state plan for economic research will have the character of binding state plan objectives. This means that they are based on the responsibility of the central organs administering research organizations of a budgetary character to give priority to assuring that these objectives be met within the framework of the available research facilities and resources. In this sense, the role of the REV relates primarily to the process of monitoring these state objectives and seeing to their fulfillment. Institutes of an economic and contributory character will participate in the state plan for economic research on the basis of commercial agreements between these institutes and the main coordinating facilities--the research centers.

To achieve qualitative changes in the level of coordination of applied economic research, and to assure the rational and effective execution of the functions of the REV and its subordinate organs (especially the individual councils of the state plan for economic research), the structure of the organs of applied economic research will be thoroughly integrated into the research centers, their internal organization and functional structure.

In conjunction with this, the composition of the REV will be supplemented with a director of research centers (the main coordinating facilities of the state plan for economic research) and by chairman of the individual

councils of the programs of the state plan for economic research. The executive vice chairman of REV, with the function of a deputy minister, will be the director of the Central Institute for National Economic Research. His responsibility in carrying out this function will be to manage the newly organized working agency of the REV for the operational management and implementation of the decisions of the REV chairman between REV sessions (this agency will be composed of the directors of the research centers and the REV secretariat).

An essential component of the measures for increasing work quality and the quality of the unified management system for applied economic research will be a strengthening of the coordinating activity of the REV secretariat.

The management system for applied economic research will be further supplemented in 1984 and 1985 by certain modifications in the areas of planning, finance, compensation, and attitudinal evaluations.

An important step in improving the activity of applied economic research will be a general strengthening of its direct ties to other fields of science, including ties between basic and applied research and ties to the results of research in other socialist countries, especially the USSR.

Closer ties between applied economic research and other fields of science and technology will be implemented especially in the areas of priority projects and the interdisciplinary resolution of basic problems (for instance, predictions). Cooperation will be developed between the REV and various fields of scientific endeavor at the CSAV [Czechoslovak Academy of Science].

One aspect of the improvement of the unified system for the management of applied economic research is the provision of more efficient integration with colleges, with the objective of achieving a more rational utilization of the R&D capacities of colleges in the economic sciences. Plans are being made, therefore, to carry out mutually interrelated changes in administration and the structure of the pedagogical process, on the one hand, and the structure of work in applied economic research, on the other. In terms of the pedagogical process, this is primarily a question of creating the kinds of prerequisites for pedagogical employees which would take account of the contemporary character of R&D activity, i.e., first of all a systematic approach, as well as the team nature of research work. In addition, it will also be essential to improve the attitudes of pedagogical employees toward research.

On the other hand, it will be necessary to apply more rapidly and comprehensively in the curricula of colleges the positive results of research, and also to utilize the training of graduate students, Ph.D.s, and programs of ordinary and postgraduate study in the interest of research and practical implementation of its results in the national economy.

Increasing the efficiency of the work applied economic research depends to a large extent on improving its relationships to social practice. This is a bilateral relationships, the improvement of which requires changes both on the side of research and that of practice.

For this reason, an inseparable component of a resolution of the relationship between research and practice is the attainment of an increased ability by operational units to assimilate rapidly the positive results of research and to create the proper environment for a creative dialog between research and practice. With this in mind, plans are being made to create forums for the joint participation of research and operational employees in all phases of the ordering, resolution and implementation of the results of research; the gradual provision for substantially greater participation of scientific and pedagogical-scientific employees in projects of an independent and conceptual character in operational economic units; as well as the gradual provision for greater mutual representation between research and scientific-pedagogical employees and senior employees of independent facilities of central organs and of important economic organizations.

Another task that has been assigned is the assurance of the requisite environment under operational conditions for the implementation of the positive results of research, in both an organizational and an attitudinal sense, but also in the sense of the necessary professional preparation for operational employees so that they can resolve complex socioeconomic problems requiring a more creative and knowledgeable approach.

In the area related to the reduction of administrative employees, CSSR Government Resolution No 346/1981 decreed that the number of employees be reduced in organizations of the scientific research base of an economic character. The measures which have been approved for the improvement of work and of the unified system for the management of applied economic research take account of this objective, and as stipulated in the above-mentioned resolution specify the concret means and approach to meeting it.

These reductions will be distributed unevenly over 10 cross sectional economic institutes, 13 branch technicoeconomic institutes (or organizations), institutes managed by agencies of the CSR Government (5 institutes) and the SSR Government (7 institutes) and will be implemented by 1985.

9276

CSO: 2400/381

## REMUNERATION CRITICIZED AS NOT RELATED TO PERFORMANCE

Prague RUDE PRAVO in Czech 6 Jul 83 p 1

[Editorial: "Productivity and Wages"]

[Text] Judging from the first 5 months of this year, most planned tasks are being fulfilled to satisfaction. The dynamism in our industry thus far has been higher than the plan had stipulated; the branch of agriculture is coping well with its tasks in livestock production; construction enterprises also are meeting their plans in general. Exports to socialist countries are progressing well, however, sales of finished products are less satisfactory; the desirable balance between production and consumption could not be achieved, or more precisely, the wishes of the consumers have not been satisfied. On the whole, fuel and energy consumption has declined in accordance with the plan, but the reduction of the consumption of metal has been less successful.

Among some other indicators, the relation between the growth of labor productivity and the growth of average wages is noteworthy. For some time their interrelation had failed to respond to economic needs. Labor productivity is not rising at the rate at which wages are increasing, although correct economic development demands that productivity grow faster than wages.

What are the reasons? They may be found in the enforcement of wage principles in practice as well as in production per se. The Set of Measures for Improving the Planned Management System of National Economy underlined the principle of direct correlation of wages in the creation of new values as well as of merits in determining the rewards for work. It demands that not only the amount of work, but also its quality and social significance be considered. It should be noted that the volume and social significance of labor are expressed in general wage-setting regulations, however, the standard of quality depends mainly on direct evaluation of the work performed. Thus, while objective assessments prevail in two of the preconditions, the assessment in the rest is rather subjective, even though there is no lack of objective criteria. Nevertheless, they are not applied systematically enough to produce a desirable effect.

What are the consequences? Wages for inferior performance are often good; the value of the completed output is not commensurate with the wages paid. However, neither is the indicator representing the amount of work always thoroughly enforced, nor is it rare for wages to be paid for time spent on the job rather than for time spent actually working. In this conjunction, particularly in the operation of construction enterprises, projects are often vague and organization of labor inadequate; no sooner is the work completed when it is destroyed, remodeled or redone. Labor costs are growing without any change in the resultant utility value of the work. Our citizens criticize such glaring shortcomings, and justly so.

Much has changed in terms of labor discipline and responsibility, and many enterprises could be mentioned here which operate at full speed from the start to the end of the shift and where shifts are changing with the machines in full operation so that no time is lost on the job. Nevertheless, as the curve of power consumption graphically shows, in many enterprises power consumption begins to rise about 30 minutes after the beginning of the work day and declines again uncontrollably 30 minutes or even 1 hour before the end of the shift. Something is wrong with the morale of labor in such plants and their economic management as well as social organizations should pay serious attention to that problem.

It is easy to see that with such practices the wages paid are not commensurate with the value of the performance; they may exceed it only in the amount, but if in some places inferior quality is added, the discrepancy spreads further. It must be noted, however, that the criteria quality of production have been tightened in the overwhelming majority of our industry as a result of the regulations of the Set of Measures which deduct all kinds of reimbursement for inferior results (restitutions, discounts, penalties, etc.) from final economic results with direct impact on the amount of wages payable. All the reasons mentioned here and also some others distort the development of wages and contribute to their undesirable correlation with labor productivity.

Nonetheless, the area of labor productivity with its own shortcomings also contributes to the undesirable development. One of its major flaws is the demand that the process of reproduction be intensified, which has not been understood in every place. The extensive method of development was practiced for many years and became rooted too deeply in the minds of many economic managers who were accustomed to increasing labor productivity by building new facilities rather than by rationalization and modernization, by introducing new technologies or methods of production, or by other kinds of labor organization. They considered achievements or research and development [R&D] more of marginal interest than priority or preconditions for further development which are now irreplaceable. Some of them even thought that it was a much too expensive proposition to replace work forces with mechanized or automated processes, although at the same time they would bewail the shortages of manpower.

All the above-mentioned and some other vestiges of the past must be overcome once and for all, the sooner the better. The task of rendering production



less labor-intensive--which is one of the factors in labor productivity--must be considered as urgent as conservation of power or materials. R&D are the sources of decisive factors favorably affecting the growth of labor productivity. This has been emphasized on several occasions during the Eighth Plenum of the CPCZ Central Committee. Naturally, there are problems involved in the introduction of new methods of production, new types of technology and new organization of labor, but that cannot excuse the inertia of technologically outdated methods of production.

Thus, two factors contribute toward the disadvantageous relations in the growth of labor productivity and wages and both must be corrected with tenacity and without delay. Our society has exceptional interest in their mutually commensurate rise. It is, therefore, imperative to produce better than before and to differentiate rewards more stringently according to the real value of the performance.

If the value of goods is not in the required harmony with the amount of wages paid, the absolutely requisite balance is impaired. To put it briefly, money received for work which is not commensurate with the value of the work is not properly counterbalanced by the value of whatever the workers wish to acquire for their earnings. Thus, the purchasing power and the structure of demands in the domestic market are not balanced.

Unfortunately, the relation between labor productivity and wages, representing one of the indicators, does not seem too exciting for many managers of our enterprises. When everything goes well, they do not fail to boast, otherwise they do not attribute much weight to such relations. They ignore the fact that this is a relevant economic indicator which reveals not only their stewardship but above all, relations to the needs of society and the satisfaction of those needs.

As such, the relation between labor productivity and wages must conform to the planned objectives, otherwise it becomes a serious impediment in the effort for a balanced development of our society and its economic and political stability and in upholding our citizens' living standard and social welfare.

What is the correct solution for such disadvantageous relations? To respect honest work, to use it as an example and reward it. To castigate sloppiness and indifference; to take rigorous steps against any lack of labor discipline and responsibility. In the entire process of production and in the preceding stages to enforce vigorously everything that accelerates the growth of labor productivity, above all, the achievements of R&D.

9004

CSO: 2400/373

MORE INTENSIVE USE OF SOIL URGED

Bratislava ROLNICKE NOVINY in Slovak 18 Jul 83 p 3

[Article by Vaclav Polakovic: "Significant Potential Source of Bulk Fodders--Intermediate Staples--A Path Toward Optimum Utilization of Arable Land"; passages enclosed in slantlines printed in boldface]

[Text] /We know that we have no farmland, particularly arable land, to spare. Hardly a little more than an even 50 percent of the total area of Slovakia. A lot of it--mostly of highest quality--was lost in the past to meet the needs of industrial and residential construction, its allocation into forest land resources, but also through an irresponsibly liberal approach to laying out agricultural farms, agricultural installations, manure pits, ensiling facilities, even in stacking of straw. We luckily realized it before it is too late to put a stop to its attrition. It stands to reason that what we lost through expropriations will never be given back to us. Thus, if we are to achieve self-sufficiency in food production, the more there looms in the foreground the inevitability of intensifying agricultural production, primarily by constant care devoted to improving the quality of soil and through its highly effective utilization./

One of the successfully tried approaches to most effective utilization of farmland, particularly of arable land, is attainment of not only one, even though rich, harvest, but two or even more harvests. This applies particularly at the present time when in followup to the highly dynamic development of animal production, particularly of horned cattle, production of bulk fodders is increasingly coming into the foreground. /And a significant potential source for increased production of bulk fodders, specifically through optimum utilization of arable land resources during the vegetative period, is cultivation of intermediate staples. The structure of plant production in the Seventh 5-Year Plan makes it possible to have the share of all types of intermediate staples range permanently between 10 to 12 percent of arable land area and, in differentiation according to local conditions, from 5 to 20 percent./

Intermediate staples play several important roles in plant production. First of all, by making use of the vegetative period they balance and improve the fodder base for animals through extending the time for feeding of green fodder in time for the spring /and prolonging it to autumn. Their cultivation also offers the prerequisites for an eventual establishment of contingency stockpiles for years less favorable than the current year, or for unexpectedly protracted periods of winter feeding./

Of no less importance are the effects of intermediate staples on improving the quality of soil. Through postharvest and root-system enhancement as well as by providing plant cover in the summer, they improve the soil's fertility. /In addition, during the time between cultivation of two main crops they fulfill their antierosive function, particularly on slopes. And some of them, in crop rotation with a high share of cereals, also fulfill the function of a sort of interrupter./

#### Do Intermediate Staples Pose a Risk?

It would appear that due to the indubitably positive properties of intermediate staples their cultivation would be a matter of course for good farmers. However, the extent of their cultivation shows that this is not the case for the time being because thus far only 3 to 5 percent of arable land acreage was used for sowing them. The argument voiced against expansion of planting under summer stubble fields and annuals is the risk they pose and against winter subplanting that it reduces the yield of the subsequent main crop. /However, their strain and culture composition is now being expanded and experience in their cultivation under experimental and operational conditions has been positive./

The extent of intermediate staples cultivation depends on the production area and structure of plant production of a specific agricultural enterprise. Cultivation over large areas is envisioned for lowland regions where the vegetative period is sufficiently long and where there are prerequisites for planting winter, summer and stubble field intermediate staples. In foothills and in mountainous regions, this involves primarily annual planting of annual and multiflora dandelion, eventually sowing of stubble field intermediate staples for use in early spring.

From among all the groups of intermediate staples in crops, the least risk is posed by intermediate staples planted in winter. The extent of their cultivation is given by the need for green fodder in spring from 10 to 15 April in lowlands, or from 20 to 25 April in foothills, that is, till the start of harvesting main fodder plants.

Intermediate staples for fodder that are planted in winter should be cultivated on an acreage of 3 to 6 percent of arable land with a 25 to 40 percent share of all intermediate staples. /Preliminary plantings should include plants that provide a sufficiently long time for preparation of soil and sowing of autumn intermediate staples toward the end of August and beginning of September. In lowland regions it is advisable to follow up intermediate staples by planting of corn for silage or for green fodder and in foothills by planting late potatoes./

## Keeping in Mind the Ripening Sequence

In selection of strains and cultures we ought to keep in mind the sequence of ripening and the relatively long--2 to 4 weeks--time for their utilization in the spring. For that reason, it is advisable to select several strains and cultures with different ripening time.

/Experience shows that the earliest fodder is provided by the Perko hybrid of winter rape plant which reaches its green shoots phase in lowland regions, as a rule, as early as the first week of April and in potato-growing regions by the end of the third week. In full bloom, it yields 20 to 30 tons of biomass per hectare with 8 to 11 percent of dry matter contents./

Winter fodder rape plants, specifically Eragie, Kentan, Emerald cultures and others are 5 to 7 days late in comparison with Perko and they must be harvested before they burst into bloom. After fodder rape plants, follows harvesting of intermediate staples for winter rye. These should include primarily early, imported cultures, because ours are less suitable for later development. Rye must be harvested before the onset of full stalk development, because after that it hardens rapidly and its nutritive value is reduced.

In lowland regions all intermediate winter staples must be harvested by 10 May at the latest. Here applies the rule of thumb that each day by which sowing of the subsequent crop is delayed, reduces its yield by up to 2 percent. If the winter plants are in close to the agricultural center, it is of advantage to use them for rationed or zoned grazing.

## Not a Single Vegetative Day Must Be Lost

Summer and stubble field intermediate staples in lowland regions should form 6 to 7 percent of arable soil acreage. They are cultivated after coarse grain mixtures, early potatoes and early vegetables. Of particular importance to successful cultivation of summer and stubble field intermediate staples is expedient tilling of soil that also saves soil moisture. Here the principle is not to lose a single day of their vegetation. /Depending on the preplantings and the condition of the soil, use can be made of abbreviated or minimum soil preparation. Sometimes, when plowing to loosen the soil produces large clods, it might be better to give preference to shallow or medium plowing./

Summer and stubble field intermediate staples provide fodder for late summer and autumn feeding. The key types are green corn, sunflowers, or their mixtures with coarse cuttings. Corn and sunflowers must be harvested and fed prior to the arrival of early frosts. The Perko winter rape plant is also suitable as a summer intermediate staple. Due to its resistance against cold, it can be left in the fields till spring, provided that it was mowed in time in autumn.

/Stubble field intermediate staples, which are particularly viable during this harvesting time, have at their disposal a shorter vegetative period. They are sown in July until the first half of August. To this short

vegetative period must be subordinated primarily selection of types with rapid development, low demands on sowing and inexpensive seed./ Selection should take into consideration the plants' resistance against frost and, consequently, prolongation of vegetation till October or even November.

#### Even Animals Do Not Accept Everything

On the basis of the findings made so far, animals do not accept all cabbage-type plants. Most tasty are Perko and the Tyfon turnip and only then fodder rape plants and the Raula mustard plant. Animals have the most difficulty in accepting Wittasso mustard plant from Serept and white mustard plant. It is advisable to feed the cabbage-type plants with other fodders, or with fodders and straw. And it ought to be remembered that they must be fed immediately after mowing, within 3 to 4 hours. Failure to do so risks having the shredded mass heat up, increasing the danger of risking a higher generation of toxic nitrates. Perko and Tyfon, due to their low contents of fibers and relatively high content of sugars, are also suited for feeding pigs.

/Cabbage-type brassicae are intended primarily for direct feeding in their green state and only in extreme cases can they be preserved by ensiling. Only those with higher contents of sugars, specifically Perko, Tyfon and Buko, are most suitable for ensiling./ Their high contents of water in the biomass is disadvantageous. Therefore, the best way of ensiling is to use shortly cut straw as absorption material. However, the share of straw must not exceed 25 to 30 percent in order not to lower its digestibility due to excessive fiber content.

This year's weather was favorable to bulk fodder crops. After last year's experience, our farmers paid increased attention to them, particularly to their timely harvesting and quality storage. It would appear that there is enough of them and that there is no need to worry about winter. But what if it does not work out that way. The saying has it that a sparrow in hand is worth more than a pigeon on the roof. We do not know what this year's winter will be like, so supplementing bulk fodders by intermediate staples, or prolongation of green fodder feeding might become highly desirable. Underestimating this source of fodder could cost us delay.

/Current findings indicate that sowing of intermediate staples is expanding considerably. However, an unresolved problem remains the composition of their types that affects the yield and the quality of fodders itself. And it is the latter that deserves our particular attention./

8204

CSO: 2400/385

BETTER COORDINATION IN NUTRITIONAL CONSUMPTION, PRODUCTION URGED

Prague ZEMEDELSKE NOVINY in Czech 7 Jul 83 p 3

[Article by Engineer J. Vigner and Engineer O. Stikova, Research Institute for the Economics of Agriculture and the Food Industry, Prague: "Computer Technology for Coordinating Food Production and Consumption; What Changes We Need in Nutrition"]

[Text] The conditions for producing food, including the essential sources of raw materials, are limited in a number of countries, Czechoslovakia included. To ensure the growth of food consumption and structural changes in it, therefore, these countries are forced to import either certain foods or means of production. The agriculture and food-industry complex contributed significantly toward the unfavorable development of Czechoslovakia's balance of payments under the 6th Five-Year Plan. Thus foods and the means to intensify their production are increasingly becoming strategic goods.

The more important, therefore, that the basic directions in our population's nutrition start out from the possibly most advantageous utilization of our natural and economic conditions, from domestic sources as much as possible.

How We Are Nourished

An analysis of the development of food consumption and of its structure in Czechoslovakia in 1965-1980 reveals its principal characteristic feature: a pronounced rise in the consumption of the main food groups of animal origin. For example, per capita annual consumption of meat (calculated in terms of bony meat) increased by 23.9 kg or 27.9 percent; of milk (in terms of whole milk), by 52.4 kg or 22.5 percent; and of eggs, by 112 eggs or 35.2 percent. On the other hand, the per capita annual consumption of cereals, potatoes, pulses and vegetables declined. Of the other groups of foods, there were moderate increases in the per capita annual consumption of sugar, fats, fish, and also of fruit (due predominantly to the increased importation of citrus fruits).

Besides increased intakes of calcium, iron, phosphorus, and vitamins A, B<sub>1</sub> and B<sub>2</sub>, these structural changes resulted also in an increase of the total intake and, within it, of the intake of the more valuable proteins. From the viewpoint of quantity, the attained level of food consumption in Czechoslovakia can be rated as high to excessive. A further improvement in the structure of the intake of principal nutrients is necessary (less fat), and the intake of so-called protective substances (vitamins and minerals) must be increased.

## Problem and Its Model

At the Research Institute for the Economics of Agriculture and the Food Industry, Prague, some studies were prepared recently on the questions of farm production's structure and intensity, from the viewpoint of the population's sound nutrition. A modeling assignment was selected whose inputs are the following elements of a biological or economic nature:

--Nutritional requirements whose computation, in view of their biological essence, represents an objective criterion on the scale of man's other needs;

--Production volumes of individual farm products;

--Nutritional value of these farm products;

--Target function coefficients that express the total input of social labor necessary for a unit of the product's weight.

This last aggregate value indicator can be replaced directly by a series of partial national economic indicators (for example, by the required direct labor, the required investment, the capital intensity, the required foreign exchange, energy, soil, etc.), and the appropriate solutions can be optimized accordingly.

The basic economic requirement in seeking a solution is to minimize the total input of social labor. Modern computer technology is able to calculate within a short period of time a number of modeling assignments that mutually differ (in the structure of production as well as in the level of food consumption). From among them it is possible to select the most advantageous solutions that point out the economically and nutritionally best directions and simultaneously indicate also the requirements regarding the sensible consumption level of individual foods. Otherwise it would be very difficult to judge whether, for example, a per capita annual consumption of 110 to 120 kilograms of bony meat is or is not excessively high.

## Decisive Weight of Livestock Production

Evaluation of the optimized variants demonstrated the decisive influence of the output volume and structure of livestock products on the resulting solutions' economic intensity. Livestock production accounts for more than 75 percent of the total input of social labor. Per unit of weight, the output of animal proteins is nearly six times more expensive than the output of vegetable proteins. Similarly, livestock products as sources of energy in man's nutrition are 11 times more expensive than products of vegetable origin.

There are considerable differences in economic intensity between the individual species of livestock, as evident from a comparison of the inputs of social labor (Kcs) necessary to produce 100 grams of protein (calculated in 1982):

Milk	14.06	Fish (carp)	21.41
Eggs	15.09	Beef	22.86
Chickens (broilers)	18.42	Mutton	30.31
Pork	20.11		

## Milk Protein the Cheapest

If we consider the advantage of producing protein in cattle raising, we find that the average value of social labor per 100 grams of protein ranks cattle in second place, after egg production (milk accounts for 73 percent of the output from cattle, and beef for 27 percent). The economic intensity was clearly the highest of the solution where the proportion of the production of slaughter animals was higher, while the cheapest variants were the ones that gave preference to milk production, at the same output of animal protein.

How the individual species of livestock rank in terms of utility depends on their ability to convert the nitrogen-containing substances in their feed into final product. On average for 1980-1981, the following values were obtained:

	<u>Conversion ratio</u>
Milk	4.42:1
Eggs	4.91:1
Poultry	5.34:1
Pork	5.68:1
Beef	11.03:1

Further computations investigated the area of farmland necessary to produce a unit weight of livestock products. After conversion to proteins as the common denominator, the following sequence was obtained: eggs, poultry, milk, pork, and beef. Here the decline of the production of milk protein to third place was influenced particularly by losses of bulk fodder, and by the low degree of the utilization of grasslands.

## What the Research Solution Indicates

Taking into consideration the production possibilities and the realistic consumption, from among the series of optimized variants we selected one as the research solution. In comparison with the level of consumption attained in 1980-1981, the research solution calls for the following changes in the principal groups of foods:

	<u>Change in annual per capita consumption (kilograms)</u>
Meat (in terms of bony meat)	-4.0
Of which: Pork	-9.5
Beef and veal	+3.2
Poultry	+2.0
Other	+0.3
Eggs	-
Milk (as whole milk, without butter)	+36.0
Fats jointly	-1.6
Of which: Animal fats	-0.8
Vegetable fats	-0.6
Sugar (excluding sugar for fermentation)	-7.3
Cereals (as flour, including rice)	-5.8
Pulses	+4.6
Potatoes	+17.3
Vegetables	+17.3
Temperate-zone fruit	+10.1



It is desirable to actively influence the production and consumption of foods in these proposed directions. Attainment of sound nutrition for all members of society must be regarded as purposeful and economically efficient management of the entire reproduction process, in accord with the given conditions of the national economy. Only in this comprehensive conception will it be possible to ensure a level of the population's nutrition that corresponds to the population's high standard of living, while constantly increasing the degree of our self-sufficiency in food production.

1014

CSO: 2400/376

DISASTROUS LAG IN PRODUCTION, SALE OF CALCULATORS DECRIED

Prague HOSPODARSKE NOVINY in Czech 8 Jul 83 p 7

[Article by Dr Ladislav Koppl, Czech Ministry of Trade: "Calculators in a Vicious Circle"]

[Text] Electronic pocket calculators are one of the ten most successful, and simultaneously the most significant, innovations in the area of applied consumer electronics. Ten years ago, however, they were regarded more as a demonstration of the technology, rather than of the commercial possibilities. In 1972 the average retail price of pocket calculators was around 200 dollars, but the basic functions that the models at that time were able to perform were, from the consumer's point of view, "little music for a lot of money."

Mass production of calculators, permitting a reduction of their production cost and hence also of their price, was contingent on their mass consumption, which in its turn depended on a low price of the offered calculators. On a world scale this vicious circle was broken and, as a result, roughly 600 million pocket calculators were made and sold in the period from 1972 through 1982. In Czechoslovakia, however, neither production nor trade has been able to meet so far the basic prerequisite for development.

Still a 'Nonconventional' Product

While pocket calculators evidently are maintaining in foreign markets the record for the rate and scope of a basic technological innovation's acceptance and mastering in current consumption, in Czechoslovakia pocket calculators still belong among the "nonconventional" products whose sale is not being developed successfully, neither on a scale determined by consumer interest, nor in accordance with the interests of society as a whole.

On the markets of the industrially developed capitalist countries the marketing offensive to sell calculators was truly impressive. Sales in the United States increased from 1.0 million pocket calculators in 1972, to 18.7 million in 1973, and within 4 years 70 percent of the households had calculators. At the same time the proportion of sales for replacement rose from 4 percent in 1974, to 20 percent in 1975, primarily as a result of replacing simple models with technologically and functionally more advanced types.

In Western Europe the sales boom for calculators lagged two or three years behind the United States, but also here the sales volume's growth rate was

unusually rapid. In the 6 years from 1975 through 1980, total sales in most countries permitted equipping every household with an electronic pocket calculator, and in many countries there were even several calculators per household.

In Czechoslovakia, electronic pocket calculators began appearing on the domestic market in 1974-1975. A year later, supply on the domestic market--including Tuzex--exceeded the 100,000 mark. Thus even though calculators were introduced into consumption with a "leap" also in our country, the ratio of total sales to population remained significantly lower.

While in Western Europe an average of 82.7 calculators were sold per 1000 population in 1980, sales in all trade systems within Czechoslovakia averaged merely 8.9 calculators per 1000 population. Sales in 1982 were even lower than in 1977.

#### Merely 5 Percent From Retail Trade

If amidst this situation the proportion of households equipped with a pocket calculator nevertheless increased in Czechoslovakia from 15 percent in 1979 to 21 percent in 1982, this was a result of the private initiative of interested individuals, and of the spreading of more or less illicit forms of sale.

A survey conducted at selected secondary schools in 1982 revealed not only the consumers' intensive interest in small-scale computer technology (80 percent of the surveyed secondary-school students in Prague, and 40 percent outside Prague, had pocket calculators), but also the missed opportunity to sell this product through the retail network.

Merely 5 percent of the surveyed secondary-school students had purchased their calculators retail. But 45 percent had obtained them in Tuzex stores, and a full 50 percent of the calculators originated from private or otherwise unspecified sources. The drawback of this situation--at least in the schools--is the enormous diversity of the calculators with which the students are equipped, which is hampering efficient use of calculators in the pedagogical process.

Remedying this shortcoming in such an important area as training for a future occupation (not only in secondary schools and higher educational institutions, but to an increasing extent also in blue-collar trades) encounters several barriers. To include calculators in the equipment of the schools or among the study aids that are provided free of charge would be organizationally and technically cumbersome, and financially very costly. Standardization and wider procurement by students are again hampered by the present price level of this range of products, although this unquestionably would be a more advantageous and more efficient solution.

#### Only What a Student Can Afford From His Allowance

Worldwide the commercial success of electronic pocket calculators has been based not only on the rapid development of the technology, but also on the simultaneous "price revolution." An initial principle, fully realized in the course of subsequent development, was the conviction that calculators had to be a commodity that "a secondary-school student could afford from his allowance."

In the United States, the average price of a pocket calculator dropped from 200 dollars in 1972 to 23 dollars in two years. In Western Europe, too, marketing of this product line was supported by a dynamic price policy. In spite of changes in exchange rates, growing inflation, and shifts in the structure of supply, the average price of a pocket calculator in 1982 was half of what the average price had been in 1975.

Under our conditions this development (although in a different relationship to the other indicators) was reflected in the supply offered by Tuzex, where the average price of a calculator dropped roughly by 60 percent from 1976 to 1982. At domestic-trade organizations, however, the average price in 1982 remained at the 1978 level (thanks primarily to deliveries of the Tesla OKU 205 model), while the average price of a so-called technical or engineering calculator increased by 56 percent during the same period.

From the consumer's viewpoint, the average retail price of a technical calculator offered on the domestic market--i.e., 2300 korunas--is more than double the so-called "optimal" price established on the basis of a price sensitivity test. Practically all the subjects surveyed in 1982 felt that a calculator at this price was "expensive"; for 85 percent of the surveyed consumers this price was so high that they were not willing to even consider buying a calculator.

#### Barriers and Limits

The price barrier to the development of the consumption of electronic pocket calculators thus contributes to the curious fact that in Czechoslovakia the sale of consumer electronics products, which in the industrially developed countries belongs among the most dynamically growing areas of consumption, did not keep pace in 1972-1981 even with the development of the overall retail turnover and lagged significantly behind the development of the retail turnover of industrial goods.

While such a finding is unpleasant in the case of consumer electronics products intended mostly for entertainment and recreation, it is outright disturbing from the viewpoint of the development of work efficiency, the quality of management, the upgrading of skills, etc. Continuation of the present development of calculator prices on the domestic market not only places at risk the quantitative growth of demand; it also limits the possibilities of the product line's qualitative improvement.

Neither trade within its own competence, nor essentially production itself can ensure adequate supply of the market demand (more than 40 percent of the consumers surveyed in 1979 expressed a desire to own a calculator) and satisfy entire society's interest to develop consumption intensively. The entire problem includes the questions of the valuation of imports, of the price level of the necessary components, and of the necessary international cooperation. Therefore this problem can be solved only above the ministry level and requires a comprehensive approach.

However, solution of the entire problem of supplying and consuming electronic pocket calculators is influenced not only by the complexity of the individual

questions, but also by the need to maintain at least overall contact with the world market in the consumption and use of this line of products. In this context even partial and operational measures--such as creation of suitable conditions for import, reduction of the turnover-tax rates, more advantageous purchasing opportunities, coordination of the various trade systems' policy on their product lines, etc.--can be of considerable importance.

1014

CSO: 2400/374

## WAYS TO EXPORT ELECTRONIC PRODUCTS SOUGHT

Prague HOSPODARSKE NOVINY in Czech 8 Jul 83 p 7

[Article by Engineer Otakar Becvar, science candidate, Federal Ministry of the Electrotechnical Industry: "The Electrotechnical Industry Is Seeking Ways to Export; Cooperation Between Production and Foreign Trade"]

[Text] Engineer Dusan Hrnčirik, economic director of the Chirana Concern, described in the No 14, 1983 issue of HOSPODARSKE NOVINY the procedure for introducing at his economic production unit an experiment to raise the efficiency of export. The article concentrated primarily on the economic aspect of the problem. As evident from the response, however, it appears to apply to other sectors as well. Today's contribution, which ties in with the mentioned article, focuses more on the commercial aspect of the link between a branch of production and foreign trade.

Progressive sectors--in their various modifications, heavy-current electrical engineering and electronics are regarded as such--should find a corresponding response in the intensity and forms of foreign-trade activity. In addition to the customary procedures, therefore, such a dynamic program also requires a more entrepreneurial approach, including the assumption of unavoidable risks.

### Changes in Approach and Mentality

A rise in the efficiency of export, since that essentially is what we are aiming for, can be achieved of course only with technologically advanced products, offered at competitive prices. However, another important prerequisite is production's sensible inclusion in foreign-trade transactions that, from a professional viewpoint, have been handled perfectly. With its potential, the electrotechnical industry should be a reliable supplier of foreign trade.

We have already succeeded in overcoming, I believe, the outdated view that production is there to produce, and foreign trade is there to export whatever products foreign trade gives it to export. And we are successfully changing the mentality of the people, making them aware that this is the common task of the two components. One of these components, the production technology within the electrotechnical industry, is about 100 times larger in terms of personnel than the foreign-trade component.

Cooperation should manifest itself in that the larger partner--by quoting with initiative, shipping faultlessly, and providing all customer services before and after the sale--frees the foreign-trade personnel to work the foreign markets. The activity of technology and production should be evident also in the assumption of responsibility for product development and defense of the products during acceptance testing, for operationally processing of the projects on which the system bids and their assembly, and for providing technical services.

The most difficult task is to persuade the production personnel that they will be rated on the basis of the foreign exchange that flows in from the sale of their products. It will be some time before production becomes fully aware that it influences the collection of foreign exchange, albeit indirectly, through the perfect technical level and quality of the products, and by providing faultless services. Specifically these are the product characteristics that make the products salable, on good terms, to customers who are highly solvent. The lion's share of responsibility for this rests with production.

### Experiment

Otherwise it can be said that units of the electrotechnical industry are introducing with great responsibility the experimental verification of measures to raise the efficiency of external economic relations. The scope of the experiment is considerable because in trade with nonsocialist countries, where most of the emphasis on the experiment lies, the experiment covers 58 percent of the exports planned.

Of the newly introduced principles, most are being verified experimentally at some of the exporting economic production units. For example the indicator of foreign-exchange collections is being tested at the Heavy-Current Electrical Engineering Plants (Zavody Silnoprude Elektrotechniky) and Chirana; the indicator of export f.o.b. Czechoslovak border, at the Tesla Measuring and Laboratory Instruments Concern (koncern Tesla Merici a Laboratorni Pistroje). At the experimenting economic production units, the inventories of finished products for export have been transferred from foreign trade to the concerns' production enterprises. On 25 March, the first contract was concluded for the provision of services, between the Tesla Measuring and Laboratory Instruments Concern as customer, and Kovo [Foreign-Trade Enterprise for Precision Engineering Products] as supplier. This foreign-trade organization has accurately adapted its organizational structure to the production base. The issued rules have solved in detail the questions of the plan, linkage, pricing, and relations in the phase of realization. Under the conditions of the electrotechnical industry, however, the greatest problems arose in the phases prior to realization and in providing technical services. In the ministry rules, therefore, the tasks in the areas of market research, obtaining orders, and providing technical services have been developed further.

In some cases the adopted control actions contain provisions for the gradual intensification of the introduced individual measures. In the electrotechnical industry, for example, the possibility will be investigated of changing over from the indicator of export f.o.b. Czechoslovak border to the indicator of foreign-exchange collections, of determining the value of export at the current purchase prices, of concluding further contracts for providing services, etc.

## Integration of Activity

In accordance with the principles of the Set of Measures, the experiment represents a new form of linking foreign trade and production. But this is not the only form; in the export of electrotechnical products, therefore, certain other measures also are being sought that could contribute toward raising the efficiency of export.

Measures are being introduced to broaden coordinated teamwork by the ministry's research institute, production, and the appropriate foreign-trade organization--in other words, in the areas of R & D, production, and foreign trade--which has been experimentally tested and proven suitable in deliveries of a selected consumer electronics product to world markets.

Expansion of the Heavy-Current Electrical Engineering Works Economic Production Unit's authorization to export, and the granting of an authorization to import to the same economic production unit and to Chirana as of 1 January 1983, likewise are intended to help expand external economic relations.

Where appropriate, the new agreement on the establishment of export consortia will be employed that was concluded between the Ministry of Foreign Trade and the Ministry of Metallurgy and Heavy Engineering. The cooperation agreed upon with other ministries to harmonize R & D cooperation with the development of opportunities for deliveries should help to penetrate new markets.

## Market Research, Obtaining Orders

As one of the fundamental principles of successful exporting we regard thorough research of the foreign market in which a foreign-trade organization is cooperating with a production organization. Such market research must be directed toward obtaining information for determining the possibilities of placing the most advantageous type of product on the market, the advertising methods, the methods of obtaining orders, the need to demonstrate and test the product's conformity to specifications, the necessary repairs and the types of products considered for the given region, the composition and quantities of spare parts necessary for operation during and after the warranty period, etc.

In sum, then, it is necessary to establish the needs of the market and its absorption capacity. In the same manner, close cooperation is necessary in obtaining orders. In accordance with the assigned supplemental funds for exhibitions, fairs and other advertising at home and abroad, the foreign-trade organization plans participation, in cooperation with production.

The duties of the production organization consist mainly of providing samples, making its personnel available for the specified period of time, and of supplying with sufficient lead time all the data necessary for the sales literature. No less important is cooperation on preparing all the background material for price negotiations, which experts from production personally attend in more important cases. Efforts at so-called bidding with initiative, perhaps even in excess of the agreed export inventories, have been gaining support lately. The impulses for such bidding should come from the production organizations.



## Engineering, Services

Manufacturers and trade are responding to the trends encountered in the electrotechnical sectors within developing countries. These trends manifest themselves in that interest is declining in importing one-of-a-kind final products, but there is growing interest in importing so-called small turnkey plants (for example: telecommunications equipment, power distribution systems, and construction of hospitals and technological plants--assembly plants and instrument plants). Such standard turnkey plants have been selected for this purpose, and a system for delivering them has been established, with the participation of Elektroprojekt, a newly formed specialized planning and design organization.

Technical services require cooperation between production and trade, either in the form of a contract under which our experts provide this activity, or as a joint task to provide technical services by concluding a service contract with a foreign service organization and ensuring all the conditions necessary for its operation, including training, the supply of spare parts, etc.

### Purposeful Partnership Effort

It is not easy to sum up in a single sentence the newly begun activity in linking experimentally the electrotechnical industry's producers with the foreign-trade organizations. Essentially the point is that, in their own interest, the production organizations--by offering interesting export inventories, providing perfect samples, and supplying error-free technical documentation--enable the foreign-trade organizations to devote their full time to obtaining orders and to negotiations.

1014

CSO: 2400/374

LAW ON EXECUTION OF 1982 BUDGET PUBLISHED

Budapest MAGYAR KOZLONY in Hungarian No 30, 6 Jul 83 pp 478-479

[Law No I of 1983 Concerning Administration of the 1982 Budget of the Hungarian People's Republic]

[Text] With due consideration for the provisions of Law No II of 1979 Concerning State Finances, the National Assembly hereby enacts the following law:

Principal Amounts

Section 1. The National Assembly hereby approves the report on the implementation of Law No III of 1981 Concerning the 1982 Budget of the Hungarian People's Republic, in the following principal amounts:

485,792,000,000 (four hundred eighty-five billion seven hundred ninety-two million) forints of revenue,

498,007,000,000 (four hundred ninety-eight billion seven million) forints of expenditure, and

12,215,000,000 (twelve billion two hundred fifteen million) forints of deficit.

Breakdown of Revenue

Section 2. Taxes and other payments from enterprise organizations, not including payments pursuant to Section 3, amounted to 343.222 billion forints, 70.7 percent of total revenue.

Section 3. Social security and pension contributions by enterprise organizations, budgetary organs and the population amounted to 74.536 billion forints, 15.3 percent of total revenue.

Section 4. Taxes and duties paid by the population amounted to 11.361 billion forints, 2.3 percent of total revenue.

Section 5. Revenues of budgetary organs amounted to 36.888 billion forints, 7.6 percent of total revenue.

Section 6. Various revenues from international financial relations and other sources amounted to 19.785 billion forints, 4.1 percent of total revenue.

## Breakdown of Expenditure

Section 7. Expenditures on investment, on supplementing the councils' development funds, on state aid for private housing construction, on providing working capital in conjunction with certain state investments, on supplementing the enterprises' development funds, and on central stockpiling amounted to 53.301 billion forints, 10.7 percent of total expenditure.

Section 8. Tax refunds and subsidies to enterprise organizations to aid their production and distribution amounted to 146.466 billion forints, 29.4 percent of total expenditure.

Section 9. Expenditures on social security tasks, including family allowances, sick pay, child-care aid and other cash assistance, medical care, pensions and other provisions, amounted to 98.518 billion forints, 19.8 percent of total expenditure.

Section 10. (1) Expenditures on the tasks of the budgetary organs amounted to 163.218 billion forints, 32.8 percent of total expenditure.

(2) The breakdown of the amount in Paragraph (1) by principal tasks is as follows:

For health and welfare tasks, including the maintenance of hospitals, clinics and other medical institutions providing in- or out-patient care, the protection of mothers, infants and children, public health and epidemiology services, other health and welfare objectives, and grants for the operation of holiday centers: 25.434 billion forints or 5.1 percent of total expenditure;

For cultural tasks, including the maintenance of elementary and secondary schools, higher educational, scientific-research, cultural, artistic, child-welfare and student-welfare institutions, and sports facilities: 47.583 billion forints or 9.6 percent of total expenditure;

For defense: 20.173 billion forints or 4.1 percent of total expenditure;

For maintenance of law and order: 12.873 billion forints or 2.6 percent of total expenditure;

For central and local public administration: 7.84 billion forints or 1.6 percent of total expenditure;

For the road and bridge maintenance, municipal and community administration, agricultural, water supply, and other economic tasks of the budgetary organs: 35.598 billion forints or 7.1 percent of total expenditure;

For the renewal of the budgetary organs' fixed assets and other tasks: 13.717 billion forints or 2.7 percent of total expenditure.

Section 11. Expenditures on meeting international financial obligations, servicing domestic loans, paying interest and other budgetary tasks amounted to 36.504 billion forints or 7.3 percent of total expenditure.

## Fulfillment of the Central Budgetary Organs' Estimates

Section 12. The National Assembly takes cognizance of the fact that, within the amounts specified in Section 1, the state budget's relations with the central budgetary organs that have separate headings exceeded the estimates by 533 million forints in the area of payments into the state budget, and fell short of the estimates by 3.582 billion forints in the area of budgetary grants; and that fulfillment of the estimates, in a breakdown by headings, developed as shown in Supplement 1.

## Grants to Supplement the Councils' Operating Budget and Development Fund

Section 13. The National Assembly takes cognizance of the fact that the state grant to supplement the councils' operating budget was higher by 1.787 billion forints, and the state grant to supplement the councils' development fund was higher by 112 million forints, than the amounts specified in Section 13 of Law No III of 1981; and that fulfillment of the estimates--in a breakdown by the Budapest Municipal Council, the megye councils, and the municipal councils of cities with megye status--developed as shown in Supplement 2.

## Sundry Provisions

Section 14. The National Assembly approves the actions that the Council of Ministers and the finance minister undertook, pursuant to the authorization granted them under Sections 17 and 18 of Law No III of 1971, to administer the 1982 state budget; and that in the course of this total revenue fell short of the estimate by 5.708 billion forints, and total expenditure fell short of the estimate by 8.493 billion forints.

Section 15. This law becomes effective the day of its promulgation.

Signed: Pal Losonczi, chairman                      Imre Katona, secretary  
                    Presidential Council of the Hungarian People's Republic

1014

CSO: 2500/372

FUNCTIONING OF BANKING SYSTEM SCRUTINIZED

Budapest HETI VILAGGAZDASAG in Hungarian No 31, 30 Jul 83 pp 46-47

[Interview with Istvan Hagelmayer, director of the Financial Research Institute, by Julia Gati]

[Text] More and more is being said among both theoretical and practical economists about the functioning of the present banking system. Many are asking whether conditions are not ripe for the creation of competition between credit banks in place of the so-called single level bank system. Others feel that this organizational change alone would not change the present practice of providing credit. We asked Istvan Hagelmayer (49 years old), university professor and director of the Financial Research Institute, to take a stand in this debate.

[Question] Much has changed since the introduction in 1968 of the new economic mechanism. Things have changed in the organizational system of the Hungarian economy but the banking system remains unchanged. Should we be happy in this regard for the stability and stamina of the domestic banking system?

[Answer] It is a fact that the banking system has not changed since 1968 but, what is perhaps more essential, the role of credit has changed. In the plan directive system the role of the bank was limited to distributing to the enterprises the money needed to fulfill the plan indicators broken down for them. The role of the bank has changed exactly to the degree that there has been a change in the external and internal economic conditions, the goals of the plan and the significance of enterprise credit in general.

[Question] It has been a long time since credit was given for fulfillment of the plan indicators, but in a number of cases even the present practice shows that enterprises do not always get money for the most economical investments. What is the reason for this?

[Answer] It is sufficiently well known that the present price system and the regulated market relationships do not provide perfect orientation. That is, we do not have the ideal condition where it would be possible to establish objectively from prices and profit which investment was the most efficient. But this is not the fault of the present banking system. The branch viewpoints

are the determining ones when awarding credits--the Hungarian National Bank itself is constructed this way. But a study of and the demand for profitability at the branch level does not always mean the selection of the investments most profitable for the national economy. There have been examples already of stepping over the branch frameworks when awarding credits to expand the convertible export commodity base. But as long as the national economic plan distributes the national income broken down by branches such a bank attitude is not simply an organizational problem but rather one of economic guidance.

[Question] So the present banking system corresponds perfectly to the economic environment and needs which have developed and it is not worth thinking about changing it?

[Answer] Certainly one must think about it! As a first step we should see to it that there is a change in ratio in income regulation--in the distribution of income for the enterprises and the budget--so that there should be truly solvent enterprises which could receive credit. This might increase the role of credits as compared to the present. Then we could consider whether this banking system is really the most fortunate.

[Question] Still, in what do you see the chief weaknesses of the present banking system?

[Answer] Today the banking system is subordinated to the national economic plan and to budget policy. As such it cannot really develop an independent monetary and credit policy. It also follows from the subordinate relationship that how much credit the budget can use does not depend on the bank. In contrast to this I can imagine a situation in which the appropriate forums would decide to what percentage of the total annual social product the budget could assume credit and this might also determine how much money the bank could put out to the enterprises as credit. I consider it to be a similar problem that the MNB [Hungarian National Bank] is simultaneously a bank of issue and a credit bank. As bank of issue it creates the money itself so there is no limit to the credit it can cover and there are no profitability constraints either. To put it more understandably, this means that a credit bank--which does not create the money itself but must manage with the existing deposits--can go bankrupt if it provides credit to enterprises which cannot repay the loan. This sort of problem does not arise in the "operation" of a bank of issue if it puts its money in a bad place and does not get it back. Even if there are limits it does have the possibility of making this up. This listing should include the fact that so far we have not solved the problem of providing foreign capital for the enterprises; in capitalist countries this function is served by the enterprise stock issued. For us credits have taken over the role of access to capital even on a basis of profitability.

[Question] There are no longer any obstacles to the transfer of capital among enterprises....

[Answer] Yes, but this applies to a very limited sphere, because such a financial action is a paying one for an enterprise only if this can solve its own problems, for example, if it helps its own production security to "step in" in the investments of a background industry firm making deliveries to it. In the present system it is hardly a realistic requirement that an enterprise should provide money for investments in an area far from its own interests. We should not be maximalists. In my opinion it would be good if enterprises were not forced to immediately invest their free capital--out of justified self-defense--knowing that if they have any mobile capital it will be "regulated away" from them within moments under some heading.

[Question] Let us return to problems affecting the banking system directly. I think that separating the bank of issue and credit bank functions is only a question of resolve for this is not an impossible solution; in the capitalist half of the world there is such a division of labor among banks. But would this separation alone solve the problem?

[Answer] In my opinion the first and less risky step might be if the bank of issue sphere and the business bank sphere were distinguished within the MNB, breaking through the branch limits and creating a profitability constraint in the providing of credit. This solution would not involve much expense and it might test the operability of the system. Then we might realize the banking system called a two-level system in the professional literature, in which the credit banks are completely separate from the bank of issue. Then the bank of issue might influence these in the interest of national economic goals with economic tools--with an obligatory reserves schedule, with a discount and interest rate policy. Of course, I am not saying that this would solve every problem at one blow.

[Question] If for no other reason than that--if the bank presses did not operate without a brake--even in this banking posture there would not be more credit, so one would still have to stand in line for money in a way similar to the present one. So what would be changed essentially?

[Answer] In the first place we would have to think through according to what principles the credit banks would be organized. A division according to branches suggests itself; every branch of the national economy would have its own bank. But this would not be better than the present system in any way; here also the branch interests would dominate. In my opinion a regional division would not lead to success either. So there would remain universal credit banks to which anyone could turn for credit and in which anyone could make deposits--including, naturally, not only the enterprises but the populace as well. In this way a healthy competition for customers might develop among the banks, and if there really were no more credit which could be distributed the banks might try to attract deposits with extra services and it would be of vital interest for them to give money for truly economical goals which were sure to pay off.

[Question] Am I to understand that the competing banks could give and request different rates of interest and that there might be differences in the credit conditions?

[Answer] No, I consider this unimaginable under our circumstances. The credit conditions would be the same. The difference might be in the services offered by the bank; for example, in providing information about foreign markets and the solvency of the various parties. We might look for the difference in the fact that banks operating on a business basis would have an interest in having more people bring them their money--and thus, over the longer run, they might be able to offer more credit.

[Question] Let us indulge our imagination about the future. Let us suppose that one bank enjoys greater popularity than its competitors and so it has more deposits, which would mean that those less ready to provide "services" might fail. What would happen with the deposits of the completely innocent parties choosing the bad bank?

[Answer] I do not believe that the depositors would suffer any harm. The failure would mean that the state would reorganize the finances of the failed bank, which would not have material consequences but rather primarily moral and psychological consequences. For example, many customers would desert the badly led bank and the incompetent leaders would have to be removed.

8984

CSO: 2500/391



DEVELOPMENT OF RETAIL PRICES REVIEWED

Budapest FIGYELO in Hungarian No 29, 21 Jul 83 p 7

[Article by Tibor Pinter: "Development of Retail Prices"]

[Text] Following the relatively moderate 5.0 percent price level increase of 1981 retail prices increased by 6.6 percent in 1982, a greater increase than was prescribed in the annual plan. This was the consequence of a greater than expected outflow of purchasing power. The balance situation of the economy did not make it possible, and will not make it possible this year either, for consumption by the populace to exceed the magnitude prescribed in the plan.

Even in the first half of 1982 the increase in the retail price level was higher than prescribed in the annual plan, but as a result of the extraordinary price measures taken in the second half of the year, the rate of the increase accelerated and grew by 7.6 percent as compared to 5.5 percent for the first half of the year. About two-thirds of the withdrawal of purchasing power caused by the price increases derived from central price increases and one-third derived from price increases taken on enterprise initiative.

In the first 5 months of this year retail prices increased by 8.5 percent, primarily as a result of carry-over of last year's price measures. In this period the retail trade representing the great majority of the consumption by the populace developed according to the prescriptions in the annual plan and decreased somewhat as compared to the same period in the preceding year.

The price level of foodstuffs and luxury consumer goods increased to a greater degree than the average in 1982 in shops and catering establishments alike. The price of foodstuffs increased by 4.4 percent, catering food prices increased by 5.1 percent, the price of seasonal articles increased by 6.0 percent and the prices of luxury consumer goods increased by 13.0 percent in shops and catering establishments alike. The price level for about one-fourth of the foodstuffs--for example, milk and milk products, fats and sugar--did not change. The price increase exceeded 10 percent for chocolate, rice and cocoa.

In the first half of the year the price of seasonal articles was especially high in the shops but developed essentially at the 1981 level in the second half of the year. The latter was the consequence of the good crop in 1982 and an increasing quantity of goods from small producers. Taking the year as a whole,

the price of potatoes and fresh domestic fruits decreased by about 3 percent as compared to 1981 while that of vegetables and greens increased by 13.2 percent. The significant price increase for luxury articles derived primarily from the 20-percent increase for distilled alcoholic beverages and tobacco in November 1981 and from the 40 percent and 20 percent increase for roasted coffee and expresso coffee and beer respectively in the summer of 1982.

In the first 5 months of 1983 the price level for foodstuffs increased by 5.7 percent and that for luxury articles by 10.6 percent. This is primarily the consequence of carry-over effects of the price changes last year. This year a more significant price increase took place in the area of soft drinks. Prices for confectionery industry products increased in June.

The price level for seasonal articles decreased in the first 5 months of the year, lower by 5 percent than in the preceding year. The price moderation was greatest in the area of fresh domestic fruits (17 percent) and came to 7 and 6 percent respectively for eggs and potatoes. The price of vegetables and greens in the shops did not change although it increased slightly in Budapest. The price of seasonal articles on the markets decreased somewhat more than in the shops. The price decrease during the year was far from counterbalancing the price increases in the first 5 months of last year--with the exception of fruits--and so the average price level for seasonal articles was about 12 percent higher than it had been 2 years ago.

The great majority of clothing articles belong to the free price form and their price level increased in 1982 by 5.1 percent. The price of synthetic cloth, hightop shoes, pantyhose and carpet did not increase or hardly changed but the price increases for socks and training suits exceeded 10 percent. In the first 5 months of this year the price increase for clothing articles came to 4.8 percent, essentially the same as in the same period last year. (Prices for men's and children's readymade clothes, underclothes and shirts increased more significantly.)

The price level for assorted industrial articles increased by a total of 5.6 percent in 1982. The prices for a number of durable consumer goods--iceboxes, washing machines, vacuum cleaners, electric stoves, traditional heaters, record players, tape recorders, table radios and portable radios--decreased slightly; there was a more significant price increase for electric and gas heaters and pocket radios.

In the chief commodity groups the greatest price increase was for fuels traded with large price supports, as a result of which the total price support decreased, but it remained considerable. From March 1982 the price of heating oil increased by 48 percent; from 15 April the price of solid fuels increased by 15 to 30 percent depending on product and that of PB [propane, butane] gas increased by 10 percent. The price of gasoline was increased on two occasions in 1982 and so in December 1982 it cost 35 percent more than one year earlier.

In January-May 1983, primarily as a result of the price increases for fuels last year, and as a result of the more dynamic price increases this year for crop protection materials, sport materials, toys, musical instruments, watches, gold jewelry, gifts, household porcelain and earthenware, the price level for assorted industrial articles increased by 10.7 percent. There was also a more significant price increase in the area of vehicles--motorcycles, passenger cars and bicycles.

8984

CSO: 2500/368

FOREIGN TRADE, EXTERNAL ECONOMIC PROBLEMS WEIGHED

Budapest NEPSZABADSAG in Hungarian 27 Jul 83 p 10

[Article by Laszlo Drechsler, director of the Planned Economy Institute of the National Plan Office: "Foreign Trade and the External Economic Balance"]

[Text] For several years now creating an external balance has been the most significant constraining factor for our management. With some simplification, there are two main ways to achieve a foreign trade surplus--to export more or import less. Day after day we find ourselves faced with thousands of problems in the background of which lies the problem of a choice between these two paths. In a straightened situation should we make use of export incentive or import replacement or administrative limits on imports? Should we give priority to investments which produce primarily for export or those which satisfy primarily domestic needs? If these questions appear in very many versions in the practice of economic policy what is actually always in the background is the question on where our optimal linkage into the international division of labor lies. It would be useful to list the factors involved.

What Strategy Should We Choose?

The first, and perhaps most important, question we must ask ourselves is: What external economic strategy should we choose, what sort of general direction should our development have under world economic and world political circumstances which can be regarded as normal?

We might get answers to this question which will probably stand quite close together. We must increase and make more intensive our link to the international division of labor, both by exploiting better the possibilities given by CEMA and in our economic contacts with countries outside of CEMA. We can draw this conclusion in part from the fact that in broad perspectives--taking in the whole world--export and import are increasing substantially more quickly than production and in part from the fact that in general those countries are developing more quickly which--taking into consideration also the size of the country--are "more open," which are linked more into the international division of labor. The development of the technical conditions for production also points in the direction of expanding the

international division of labor; the advantages of specialization and cooperation and the economy of scale, which require an increase in the intensity of international economic cooperation, are appearing ever more definitely.

It is increasingly clear today that we cannot turn from this historic path; autarky and isolation are unavoidably accompanied by backwardness. Naturally a more intensive exploitation of the advantages of the international division of labor is accompanied by greater risk; somehow we must laugh and cry together with the world economy; in this way the crises and shocks can affect our economy more powerfully too. But it is worth taking this risk and the agreement in this is fairly general.

But the distant goals and the tasks of today do not coincide. There may be extraordinary circumstances; for example we may be faced with the nadir of a world economic crisis or with the peak of a protectionist wave; our liquidity situation may have developed in such a way that we must achieve a very significant export surplus very quickly.

But over the longer run, going beyond these extraordinary circumstances, even if it is true that the advantages hiding in the international division of labor can be exploited only with foreign trade, then it does not follow that more foreign trade always means the exploitation of more advantages. We might consider this equation reversible and might obscure the fact that foreign trade is only a tool and, like every tool, its use can be judged only by the extent to which it serves our goals. We do not trade because to trade is good or because we like to trade but rather because all sorts of advantages may derive from trade, which we express now by saying--with some simplification--that we should increase the efficiency of trade in a broader sense.

If we could surely count on the fact that only foreign trade deals which were advantageous for the country would be profitable for the managers then we could really trust that the more we traded the more this would help the increase in efficiency for our economy.

But because of a number of circumstances we can count only moderately on this beneficent filtering automatism. It is well known that our prices deviate to a significant degree from the ratios of both world market prices and domestic expenditures. It is not worth examining here the extent to which deliberate price policy considerations played a role in these disproportions and the extent to which we have reacted only quite late to world market price changes. Even the best intended price differences, which might be well justified in terms of economic policy, carry in themselves the dangers that a broad gap may open between enterprise profitability and economic efficiency. In the extreme case products with a negative net foreign exchange profit (or those for which the export price does not even return the import material expenditure embodied in them) may become profitable for the enterprises. Of course, these rarely occurring extreme examples do not constitute the chief danger which is the simple fact that one cannot judge, or can judge only with difficulty,

on the basis of enterprise profitability data, the economy of individual products from the viewpoint of the national economy.

A few problems of our support system may lead to uneconomical foreign trade deals too. One of the characteristics of our economic guidance has been that it was "end product centered", that we paid attention primarily to the final phase of the process, that we rewarded and punished for the delivery of the end product and did not make the "background industry" sufficiently interested in cooperation. This led to a state of affairs where even the background industry enterprises would rather export and one could find no few examples where we exported products which were needed here at home and which with suitable interest relationships we could have produced them here at home economically.

This problem was increased by the weak delivery discipline and inadequate sanctions. Frequently the background industry enterprise would not say no to the domestic order but it did not give a suitable guarantee in regard to either delivery time or the quality of the product, and this frequently forced the enterprises producing the export products (which were bound by the strict delivery conditions on the external market) to turn to convertible import--in the interest of keeping to their own time limits--when domestic production would have represented a more efficient, more economical solution.

#### Trade and Profitability

The profit interest of our producing enterprises has not worked powerfully enough to adequately ensure the elimination of unprofitable foreign trade deals either. Frequently, for example, the viewpoints of profitability were forced behind the requirements of fulfilling the quantitative export tasks. But even when the striving for greater profitability was strong enough at the producing enterprises they found it difficult to realize their intentions in opposition to the foreign trade enterprises where the interest in increasing trade was stronger than it should have been.

The foreign trade enterprise is faced with much harder partners on the foreign market (it does not have a monopoly position there) and so it could increase its own income (profit margin) more easily in its dealings with its domestic partners (which generally had no choice in making use of this or that foreign trade enterprise to conduct its deals). This also increased the danger that foreign trade deals would be made (or the deals would be made under conditions) which did not bring real advantages from the viewpoint of the country.

#### Favorable Changes

It cannot be disputed that favorable changes have taken place in the last few years. The most dangerous disproportions of our price system were eliminated with the price adjustment of 1980; we increased the interest of those making deliveries and of the background industry too; and even if in a moderate form for the time being we have created possibilities

for competition in foreign trade too, and the disadvantages of defenselessness deriving from the monopoly situation have been reduced substantially. But for the time being all this is still an unfinished process and we must still reckon with a certain inertia of the past, which may be especially strong under the constraining circumstances of an indebted situation.

Thinking all this through the proportion of deals in our foreign trade which are uneconomical and not advantageous from the viewpoint of the country may be significant even today. It would be good to free ourselves of these and this does not at all contradict the goal of an increased linkage into the international division of labor. We do not simply want to trade, rather we want to trade economically, and this requires the elimination of deals which are not advantageous.

We must also reckon with the fact that in this process of adjustment the replacement of import may have a greater role here and there than export incentive in improving the balance. The basic criterion for our decisions might be economic efficiency; efficiency and economic viewpoints must play a determining role in what path we choose at a given time to improve our external economic balance.

8984

CSO: 2500/374

READERS REACT TO CONTROVERSY OVER 'NOT,' ECONOMIC REFORM

In Defense of NOT

Warsaw ZYCIE GOSPODARCZE IN Polish No 29, 17 Jul 83 p 4

[Letter to the editor from Kazimierz Ciosk and reply by Tomasz Jezioranski]

[Text] There were two articles which appeared in Issue No 27 of ZYCIE GOSPODARCZE that I found to be very interesting, namely, the article by Marzena Kowalska giving an account of the debate on the performance of the economy after 1984 at the meeting between the government economic reform commissioner and representatives of consultant-enterprises (held on 21 June) and the article by Tomasz Jezioranski on the meeting of the Economic Reform Commission (held on 22 June). I was especially interested in the passage recounting some of the arguments "in defense of the principles of the economic reform and, in a general sense, in defense of the economic reform per se"--as Jezioranski put it in his article "First, Do No Harm"--that were occasioned by the presentation made by some members of the NOT [Chief Technical Organization] advocating changes in the basic laws governing the economic reform program.

One extremely interesting thing about this row is that both sides appeal with equal conviction to the resolution of the 9th Special Congress of the PZPR and that the argument designed to deal a crushing blow to the NOT representatives is based on, among other things, the contention that any changes which might be made in the underlying principles of the economic reform program represent "nothing less than an attempt to undermine the credibility of the country's political leadership." At one stroke, by expressing its views, the NOT group was convicted of being an enemy of socialism.... Noteworthy in this regard is the fact that in days gone by, in the quest for answers to the question "How do we do this?" decisionmakers also used to always hide behind the shield of party resolutions. But yet the congress platform is actually the party's strategic plan, a plan which maps out a series of long-range objectives, not specific, isolated programs of action.

It is an organized group of engineers that spoke out during this debate, and their opinions should be given a careful hearing, even though they may not be speaking for "all engineers and all management personnel." Apparently without any effort being made to calmly and carefully analyze these proposals they "were greeted with unqualified and scathing criticism on the part of virtually all of the others who took part in the debate."



In my opinion the proposals advanced by the NOT group served to place all of the past actions and aggressive defensive tactics of the authors of our present economic system in an even sharper focus. And I suppose that the positions taken by the NOT representatives became even harder, since they obviously were not persuaded as to the erroneousness of the underlying premises of their plan.

I admire the NOT officials for the courage with which they defended their convictions, even though they were outnumbered by the other commission members. It is supposedly better to work together as part of a common consensus, but the results of working by consensus are often pretty paltry. The majority is not always right. I think that it is better to state one's own views openly, even at the risk of being wrong, than it is to sit idly by, out of cowardice or laziness, and wait to see what happens next.

It is stated in the congress resolution that programs geared toward achieving monetary and market equilibrium should serve to bring about an increase in the output of consumer goods and services. Unfortunately, the present situation clearly demonstrates that prices are being used to compensate for shortages in the marketplace, and nobody has any idea how these prices are arrived at. Economists ought to realize that the reforms are supposed to be for the benefit of the individual citizen and that the usefulness of these reforms has to be measured in terms of economic performance. As of right now these reforms are all rather vague and their future is uncertain, as was clearly pointed out by the NOT group. Consequently, I do not know what Professor Baka is mad about.

Nor am I all that convinced that it is such a good idea to do nothing more than tinker around with prices, taxes, and wages. What I think is important is to know which agency is ultimately in charge of things and who is answerable to whom. The management of workers and industrial plants has to be efficient, and diverse means have to be employed to this end, including those advocated by the NOT officials.

Kazimierz Ciosk, Opole

The initiative brought forward by the group of NOT officials has three important dimensions which I tried to bring out in my article by quoting the opinions voiced by members of the Economic Reform Commission. Maybe this was not clear enough, so let me explain.

One dimension is purely substantive in nature and has to do with an appraisal of the merits of the measures advocated by the group of NOT officials. On this score the opinion of the experts was unequivocal, i.e., from an economic standpoint the ideas presented by this group are worthless and naive (mainly when it comes to prices, costs, and export sales).

The second dimension has to do with who the authors are. This draft program was drawn up by a small group of national-level NOT officials without consulting the NOT rank-and-file membership (see, inter alia, issue No 28 of ZYCIE GOSPODARCZE-- in the "No Comment" column). Can such a work be regarded as an expression of the views of a majority of the members of this occupational group?

Finally, there is the third dimension, i.e., and let's call a spade a spade, the political dimension. The guiding principles of the economic reform now being implemented are derived from the basic policy document titled "Policy Guidelines for Economic Reform," which was endorsed by the 9th Congress after having been widely discussed and approved by forces and organizations representing diverse political views. On the other hand, it should be pointed out that A. Kopec (see the PAP interview with Kopec published, inter alia, in the 9-10 July issue of RZECZPOSPOLITA and TRYBUNA LUDU) claims to remain faithful to the "Basic Principles of Economic Reform" that came out in January 1981 and to the "Platform Principles for the 9th Congress," but not to the resolutions passed by this congress. This is the point where things start to smell fishy. The "Basic Principles" announced in January 1981 and approved by the government in office at that time, in which A. Kopec served as a vice premier, also met with severe criticism from both experts and the general public. This is because the economic system mapped out in this document amounted to nothing more than the old system in a new set of verbal clothes. On 12 February 1981 the new premier, General W. Jaruzelski, put together a new government, of which A. Kopec was no longer a member. One of the first decisions made by the new government of General W. Jaruzelski was to withdraw the "Basic Principles" and call for the drafting of new document. This was the origin of the "Policy Guidelines," but the NOT chairman had nothing to do with the drafting of these guidelines, even though he could have in his capacity as member of the Economic Reform Commission. Thus, the declarations of support for the reform now being made by the NOT chairman can have a ring of credibility only to people with faulty memories. The fact of the matter is that it is an entirely different sort of game which is being played here.

Tomasz Jezioranski

P.S. I also suggest that the author of this letter should familiarize himself with the appraisal of the NOT program published in the 13 July issue of TRYBUNA LUDU under the headline "Virtues and Defects of the Engineer's View of the World."

#### Reaction to Jezioranski Claims

Warsaw ZYCIE GOSPODARCZE in Polish No 31, 31 Jul 83 p 4

[Letter to the editor from Stanislaw Albinowski]

[Text] Tomasz Jezioranski's reply to the letter from Kazimiers Ciosk (in issue No 29 of ZYCIE GOSPODARCZE) contains two statements whose importance should not be minimized by letting them go unchallenged. Here is the passage which I want to call into question: "The 'Basic Principles' announced in January 1981 and approved by the government in office at that time, in which A. Kopec served as a vice premier, met with severe criticism from both experts and the general public. This is because the economic system mapped out in this document amounted to nothing more than the old system in a new set of verbal clothes. ...One of the first decisions made by the new government of General W. Jaruzelski was to withdraw the 'Basic Principles' and call for the drafting of a new document. This was the origin of the 'Policy Guidelines'..." (i.e., the document later endorsed by the 9th Special Congress and the Sejm--S. Albinowski).

It is in fact not true that Premier Wojciech Jaruzelski "withdrew" the "Basic Principles" and ordered that a new document should be drawn up. The "Principles" in question never constituted an official government document, nor were they ever endorsed by the government of Premier Pinkowski. Neither was the government in a position to make any official decisions regarding this document, since at this stage of the game it was taken for granted that this document was a draft program intended for general public debate. On the other hand, as far as the merits of the "Basic Principles" are concerned, it is important to remember the following fact. Namely, on assuming the chairmanship of the Economic Reform Commission on 25 March 1981, Premier W. Jaruzelski made the following statement--and here I am quoting from the 26 March 1981 issue of TRYBUNA LUDU: "Speaking on behalf of the PZPR Central Committee Politburo, he [Jaruzelski] thanked the entire team of experts for the contributions they have made thus far to the process of drafting a plan for economic reform, which he termed the great hope of the Polish economy."

During the course of this very same meeting of the Economic Reform Commission Professor Wladyslaw Baka, the commission secretary, discussed the results of the public debate on the "Basic Principles" and observed that, while the public accepted the general thrust of the reform plan, criticisms were focused on 15 particular problem areas. Professor Baka recommended the formation of an editorial team which would address these criticisms and draft yet another version of the reform plan. This recommendation was accepted and supported by the premier.

Both of these documents ("Principles" and "Policy Guidelines") were drafted by editorial teams under the direction of Professor Baka. Both teams, each of which consisted of eight members plus consultants, included the following same four people, i.e., Professor Wladyslaw Baka, Professor Czeslaw Bobrowski, docent Cezary Jozefiak, and the undersigned. One of the members of the first team, which drew up the "Basic Principles" at the end of November 1980, was [the former editor-in-chief of ZYCIE GOSPODARCZE] Jan Glowczyk, whereas members of the second team, which wrote the draft of the "Policy Guidelines" at the beginning of June 1981, included Leopold Gluck, professors Jan Mujzel and Czeslaw Skowronek, and, as consultants, Aleksander Lukaszewicz and Jozef Pajestka.

I categorically reject the insinuation contained in Tomasz Jezioranski's statement to the effect that the "Basic Principles" represented nothing more than an attempt to smuggle through the old system in a new set of verbal clothes. This is an absurd claim, if only in light of the personalities who made up the membership of both editorial teams. It is another matter altogether that on some important points the published text of the "Basic Principles" did deviate from the final version submitted by the editorial team and the coordinating group working for the commission. This circumstance was the reason for the announcement of docent Jozefiak's "votum separatum" carried in POLITYKA and the two critical articles written by me and published in TRYBUNA LUDU (issues for 6 and 17 July 1981).

Intense and long debates were under way all the while in the commission on successive versions of both documents. But the differences of opinion that were expressed could hardly ever be categorized as running along lines separating the proponents and even the most skillfully "camouflaged" opponents of the reform. By way of example, let me cite just one fact. Namely, during a meeting of the coordinating group held on 15 December 1980 Professor Bobrowski came out against my suggestion to restore the statement holding that the enterprise is an "autonomous and self-managing" entity to the text of the document. Professor Bobrowski went on to observe that this definition of what constitutes an enterprise, although it is politically important and "compelling" in a journalistic sense, is still incorrect, since there is no such thing as a totally autonomous enterprise anywhere in the world.

Full recognition for the self-managing and autonomous qualities of the enterprise, the pillars of the new economic order, did not really come until the "Policy Guidelines" were released, but it never would have occurred to me that Professor Bobrowski was trying to work against the economic reform.

In reference to some of the other statements made by T. Jezioranski in his reply I would like to point out that Dr Engr Aleksander Kopec did not exert any noticeable influence on the text of either the "Basic Principles" or the "Policy Guidelines." However, the engineering profession was represented on the commission by some very active and constructive spokesmen in the persons of Professor Jan Kaczmarek and the late Professor Jerzy Bukowski, honorary chairman of NOT.

The recent set of proposals submitted by NOT do indeed lead in the direction of the restoration of the command-directive system. I came right out and told Chairman Kopec that this amounts to a political challenge, which, for economic reasons as well, is bound not to have the slightest chance of succeeding. At the same time, it is my judgment that the supporters of economic reform must--especially so in the face of this challenge--think first and foremost about what should be done so that things will finally start to "click" with the reform. Otherwise, all assurances to the effect that there will be no retreat from the economic reform will be nothing more than empty slogans.

Stanislaw Albinowski

CSO: 2600/1197

SEJM WRAPS UP DEBATE ON GOVERNMENT ECONOMIC REFORM REPORT

Warsaw TRYBUNA LUDU in Polish 23 Jun 83 p 4

[Article by Krzysztof Krauss: ""Economic Reform Assessed by Sejm Deputies"; passages enclosed in slantlines printed in boldface in the original source]

[Text] /(OWN INFORMATION) The several weeks of debates among deputies within Sejm commissions on the government's report on the application and consequences of the economic reform in 1982, preceding the coming plenary deliberations of the Sejm, were ended by the sessions on 22 June 1983 of the inter-commission team for the economic reform (chairman: Deputy Alojzy Melich), the Commission for the Economic Plan, Budget and Finance and the Legislative Commission (chairman: Deputy Jan Kaminski)./

/Both sessions were attended by, among others, Prof Zdzislaw Sadowski, deputy government plenipotentiary for the economic reform. Prof A. Melich was appointed the briefing speaker./

Below are the conclusions of the deputies. It is believed that the government's actions to introduce the reform deserve a positive appraisal, although with many reservations concerning both the scope of application of the solutions ensuing from the reform and the precision of the instruments employed. On the plus side, the deputies noted: the stimulation of many enterprises to increase production, the application of cost effectiveness analysis, the growth in the interest of the workforces in the economic results of production. The autonomy of enterprises in planning, employment, wages, disposition of funds (including foreign exchange), shaping of internal organizational structures and mutual association has increased.

But the reform is not properly grasped in all the branches of the economy and all the enterprises, and its application is not proceeding correctly everywhere. In many instances--a formulation that had been causing controversy as being too generalized, but that has finally been accepted--enterprises acted in conformance with the regulations but utilized their new rights in a manner contrary to the intentions and social goals of the reform. For example, many enterprises improved their financial performance by hiking their prices rather than by achieving a real reduction in costs and improvement of organization of labor. The increase in consumer incomes also could not be adequately linked to the increase in effectiveness of management, and neither have sufficiently effective mechanisms of stimulating an improvement in that effectiveness been worked out.

/As viewed by the deputies, one highly important reason for the insufficient progress in effectiveness of management has been the failure of the enterprises to employ flexible norms of labor and material consumption./

The deputies felt certain that the work of the enterprises should be based on rational norms and normatives which would also assure the proper ratio between the growth of wages and the growth of labor productivity. On the other hand, the question of whether these should be "external" or "internal" norms was a debatable issue. The view that finally prevailed was that these norms should be independently determined by enterprises but conditions should be provided for assuring their objectivization, continual updating and the systematic increase in their effect on reducing production costs and rationalizing consumption, i.e. production factors (materials, energy, labor).

/Sharp and prolonged polemics were caused by the problem of shaping prices, and especially contract prices./

Further, the deputies postulated the elimination from the credit and budget policy of those rebates and special allowances for enterprises that promote toleration of a low effectiveness of management, replacement of the progressive income tax for enterprises with the (so-called linear) proportional tax, a more active employment of turnover tax and restoring to it the "price-forming" function, and a rational guidance and planning of development but primarily by resorting to economic mechanisms.

/An important element of the debate among the deputies was the finding, agreed upon after prolonged discussion, that, considering that the reform's principles have not yet extended to the entire national economy and primarily to the power industry and coal mining, and further considering that the application of the reform to trade, transport, communications, general construction and social services is meeting with difficulties, special attention should be devoted to these subsectors. Measures should be taken to open in these subsectors the road toward deeper transformations consonant with the economic reform./

1386

CSO: 2600/1060

SUCCESS OF ECONOMIC REFORM TO HINGE ON POLITICAL, SOCIAL REFORM

Warsaw POLITYKA in Polish No 22, 28 May 83 p 6

[Article by Andrzej Herman and Andrzej Szablewski, lecturers at the Main School of Planning and Statistics: "Blank Spots in the Economy"]

[Text] The crisis situation in our country should become an occasion as well as an opportunity for change in the way in which economists view many problems of political economy.

Every economic crisis attests to the breakdown of a certain policy and concept of development while recession as serious and extensive as that in Poland indicates the emergence of a specific gap in development and the disruption of its continuity.

What form of development are we talking about? The growth of what types of values and cultural norms? How should interpersonal relationships in the work environment be developed according to socialist ideals? What should be done so that proper systems solutions will land on favorable ground in social awareness and so that they become transformed into practical activity?

New Challenges

The phenomena which moved the masses of Polish society following August 1980 and which today find themselves at the center of its interest, give rise to practical dilemmas and new theoretical challenges. Their scientific identification is indispensable. This again leaves economists facing the question: What to analyze and how?

At the same time, it is worth noting that the development to date of the theory of the political economy of socialism took place more by way of its division into specific fields than by their synthesis. Separate, narrowly specialized economic disciplines will not assure the overcoming of the crisis. What is urgently needed is the integration of efforts by economists representing various specialties and by representatives of the remaining social sciences: philosophy, social anthropology, sociology, social psychology, etc.

What are the new challenges and economic blank spots?

One of the basic issues is the modern interpretation of the leninist thesis about the preeminence of politics over economics. The question, what should this preeminence signify today and with the aid of which methods should it be implemented, requires a precise answer. The solving of the most important economic problems should serve the interests of the basic social classes in Poland.

Knowledge of the differentiation of the social situation and that of the economic interests among the working and peasant classes and among the young generation, etc. should be a point of departure in specifying policies. From this comes the meaning of the class character of studies political economy, socialism and socioeconomic policies.

In order to assure a genuine class character, economics together with sociology must penetrate to the core of classes, social strata and socioprofessional groups and communities for the purpose of recognizing and revealing their economic interests, socioprofessional aspirations and the civic way in which they manifest themselves as well as the forms and methods of struggle for their implementation. It is also necessary to make known the changes which have already been made and continue to be made here. In the past, the economic interests and socioprofessional aspirations of only certain segments of classes and groups, such as the large industry labor class, wealthy peasantry, craftsmen, etc., were taken into account.

The answer to the question: which social classes and groups and their segments suffered the most during the crisis and what is the extent of their participation in leading the economy out of this crisis also seems to be essential.

The class character of the analysis of socioeconomic phenomena must take into account changes which will occur in the next 15-20 years as well as their formation for the assurance of a high degree of efficiency and effectiveness in managing. The vision of social changes appears to be of great importance for the formulation of the party's long-range program as well as for the long-term development of Poland. The development of a long-term plan is conducive to the stabilization of moods, focuses on social and civic discussions and overcomes doubt and social apathy.

The problem matter of socialization is also taking on a specific meaning. For a long time it was underestimated by a significant segment of economists and now it is undergoing a renaissance. In the works of the classic authors of marxism-leninism, it was one of the basic categories of analysis. Socialization concentrates within itself many remaining socioeconomic processes in th-s day and age as well. It concerns not only the ownership of production means but also the relationship between distribution and consumption, natural resources as well as production on a supranational scale. This category could become an element which would integrate the efforts of economists in their studies of socialist economy.



## Domination of Tradition

The theory of economy in Poland lacks the theory of economic crises and inflation. The year 1983 is already the fifth consecutive year of a serious crisis for the Polish economy. It is this fact that undermined faith in the existing convictions that a socialist economy being a planned economy must always develop in an uninterrupted and harmonious fashion. Experience in Poland has shown that this is not automatically guaranteed by the proclamation of socialism. Practice determines this. Without the aspirations of the authorities formulated into a cohesive system of socialist establishment and economic mechanisms (and not hasty or reactionary actions), this maxim will remain only a possibility.

In a situation where economic reform enters a crucial phase, the lack of an integrated theory of the socialist enterprise system is particularly keenly felt--a theory which could find a practical application regardless of whether this would be an industrial, agricultural, construction or service enterprise and also one in which it would be possible to reconcile enterprise independence and self-government with the functions of a centrally-controlled economy.

The area of services and the nonproduction sphere also require a proper place in the theory of economy. Neglect in this area results not only from a shortage of funds for the development of these spheres but it is also related to weaknesses in the economic theory and a lack of a general outline for development with the concurrent focusing of attention on the financial sphere. It has been forgotten that the standard and quality of life as well as the level of social content is being determined to an increasingly greater degree by the quantity and quality of services rendered. Unfortunately, the state social program which is being currently implemented is becoming increasingly more dependent on the expansion of services in the form of finances which in turn only serves to aggravate market difficulties and stimulates inflationary phenomena and does not contribute to the development of the nonproductive sphere and the expansion of rendered services.

There also exists an extremely urgent need for departure in the theory of economy from the traditionally understood concept of socialistic industrialization. We are still insufficiently involved in the actual degree of satisfying social needs and the social effectiveness of management. We view the purpose of production in socialism more from the standpoint of essential outlays than from the aspect of obtained effects and in particular, we overlook their bearing on the degree of human contentment and the development of a system of life's values. We are insufficiently discerning in the analysis of the causes of the divergence between projected goals and those which have already been implemented, and at the same time, we are inconsistent in the elimination of these causes. This inconsistency is one of the important reasons for the disproportion between the aspirations and expectations of the public, and the capabilities of the economy. This in turn impedes the regaining of trust in and the credibility of the activities of the authorities.

## We Are not Unique

It is essential to break with not only the existing traditionalistic comprehension of industrialization but also with the patterns of economic growth which are associated with it. Otherwise, we will be in danger of following the course of those countries, which being already partly or completely industrialized, have not at all become highly developed; conversely, they continue to remain on the outskirts of the world economy. The industrialization process alone does not determine or guarantee progressive growth. The nature of this industrialization and the role and participation in it of its branches, whose activity determines scientific-technical progress, technological innovations and structural changes, is of fundamental significance. Without a vital change in outlook in this respect, Poland is faced with the threat of a new form of economic dependence more serious than any which has existed until now: technical and technological dependence which began with the drawing of excessive credit in the West. These credits were granted primarily for undertakings which, in fact, solidified the raw material and semifinished product character of our economy thus preserving our hardly modern and often downright antiquated economic structure. We have not changed our place in the world economy with the aid of these credits. It is not Poland but other countries that are developing new technologies and production methods and improving technology related to new forms of power management, production waste disposal, the high level of agricultural product processing, etc. Without a prompt attempt at changing our position in the international division of labor, we are faced with a gap which will be impossible to make up. This threat is all the more great that in addition to the increasing technological gap between our country and highly developed countries, there is an increasing organizational gap which cannot be filled with the science of organization or management.

We must finally and as soon as possible break with the myth of Poland's unique position among socialist countries. Currently, this unique status at best refers to the drastic decline in the population's standard of living as a result of the economic collapse and changes which took place in social awareness. It is necessary to state clearly that regression has occurred in our country in the building of socialism. A reversal is possible only, if and when the political system determinants will be taken into account not only in one country but in the entire, worldwide socialist system. Unfortunately, this problem is underrated in the Polish economy. Without research on the development of the world's socialist economic system, it is impossible to construct an economic theory of socialism today. It is also difficult to answer the question: what is socialism today; what is its essential being; what determines its attraction for countries seeking their own path of development? The undertaking of this problem matter, therefore, has a significance which goes beyond the theory of economics.

In pointing out some of the "blank spots" and "new challenges" of the theory of economics in Poland, the theory of work incentive should also be mentioned among them. It determines the success of the implementation

of economic reform. The continuing state of serious economic instability, especially market instability and the lack of correlation between emoluments for work performed and the work input make it difficult for changes to occur in the minds of workers. The attention of economists is focused on improving the system of wages which would correlate the level of emoluments with the work input by a workers in a way which would be clear and understandable to every worker. However, keeping a worker on at his place of employment is influenced by an entire complex of factors.

This also gives rise to the urgent need for deepening the state of knowledge on human needs, the ways in which they come about and manifest themselves, in short, on the factors which regulate an individual's behavior in the production process. Work incentive cannot be increased if its sense of social and economic purposefulness is not increased.

#### From a Dead Economy to Social Economy

The current economic crisis is not, unfortunately, the first in the history of our socialist state. Its most serious consequence, other than the considerable decline in the standard of living, is the drastic widening of the gap which separates our society from that of neighboring socialist countries and western nations.

At the same time, it should also be stressed that the scale and quality of changes in the economy and in the life of the population are such that the theory which should explain its reality, is no longer capable of doing that. This pertains, for example, to the theory of growth in its algebraic (balance) sense, the theory of proportional and harmonious development, the traditional theory of functioning devoid of social aspects, the account of the economic efficiency of capital expenditures of certain branch economies, etc. All of these fragments of economic theory may be considered today as a dead economy. The truths contained within it do remain important as the foundations of the theory of economics. However, the foundations themselves are not yet a home in which one can live. Without a critical self-evaluation by the community of economists, there is the threat of self-deception as well as "wishful thinking" instead of searching for effective ways of rapidly overcoming the crisis.

The experience of the last crisis reveals that as a society, we are still living on the fringes of two socioeconomic structures. We constantly find ourselves in a transitional period between capitalism and socialism. All attempts of reducing the historical perspective in this regard is not only risky but also scientifically unsubstantiated.

We are living during a crucial period for Poland. We need not only economic reform but, above all, social and political reform. The economy constitutes the social body while enterprises, cooperatives, the state administration, etc. are not only places of consumer goods production and

the rendering of services but also places where interhuman relations are formed. For this reason, political economy is taking on increasing significance as a social economy. This indicates that it cannot be treated as a science about the management of resources.

We must draw practical conclusions from this statement. The most important one is securing political conditions for reform activity within the economy and within society.

9853

CSO: 2600/951

ENVIRONMENTAL POLLUTION, HEALTH PROBLEMS DESCRIBED

Report on Environment

Olsztyn GAZETA OLSZTYNSKA in Polish No 84, 11 Apr 83 p 4

[Text] Although there are areas in Poland where the air is crystal clear, there are also places where the atmosphere has been polluted beyond all permissible levels, causing hazards to human health.

Poland's atmosphere, along with Czechoslovakia's, has one of the highest sulfur concentrations in Europe. Poland's geographical location and its aerological conditions have considerable influence on the state of air pollution, which is largely caused by sources located outside Poland's frontiers. According to a report by the State Environment Protection Inspectorate, only 47 percent of sulfur compounds found in Polish air can be traced to Polish sources, while 15.5 percent drifts in from the GDR, 9.3 percent from Czechoslovakia, and 32.4 percent from other European countries.

In the 1970's, about 3 percent of Poland's territory--its most densely-populated parts, as a rule--was affected by constant sulfur concentrations exceeding permissible levels, while 20 percent of the country's environment suffered as a result of dust and gas emissions.

The main problem are the excessive sulfur dioxide levels in the Polish atmosphere. Sulfur--contaminated air causes chronic respiratory ailments, and results in irreversible damage to vegetation, especially coniferous forests. The forest area devastated by pollution amounts to 382,000 hectares.

Poland's biggest source of sulfur dioxide (over 50 percent) is the power industry.

Five regions in Poland have been designated as danger areas due to air pollution; these are the Upper Silesian Industrial Region, the Krakow area, the Legnica and Glogow Copper Mining Region, the neighborhood of Police and the Jelenia Gora valley and region around Walbrzych.

Permissible pollution levels have been exceeded in the entire Katowice voivodship and it is estimated that about 70 percent of its inhabitants

live in areas hazardous to human life. Emissions of cadmium and lead compounds are especially dangerous.

Poland's most precious historical monuments are crumbling due to air pollution in the Krakow area. Around the copper mills in the Legnica voivodship, a high level of heavy metals has been detected in milk and eggs. The levels of fluoride and ammonia concentration in the atmosphere enveloping the Police area are several dozen times higher than permissible levels and, according to estimates, the currently constructed "Police II" chemical complex will only worsen the situation.

Unfortunately, it is not just Polish industrial giants which are to blame for hazards to local inhabitants' health. Areas do exist where permissible pollutant levels are not constantly being exceeded, but at times of adverse meteorological conditions, or as a result of protracted accumulation of detrimental substances in the air, conditions characteristic of polluted areas may occur. Such conditions have been detected in parts of Lodz, in the vicinity of the Konin aluminium plant, in the area around the Plock petrochemical refinery, as well as in Wloclawek, which is burdened by the proximity of a cellulose-paper mill and a nitrogen plant, and in Bydgoszcz, which suffers from the "Zachem" plant pollutants...

It is paradoxical to mention Polish health resorts in the context of air pollution, but unfortunately, the bitter truth is that air over several such resorts was found to contain pollutants exceeding, by several times, permissible levels. In Jastrzebie--in the Katowice voivodship--dust levels were 18 times higher than permitted for spas and levels of nitric acid concentration were exceeded as well. In Szczawno, another resort, these standards were five times over the limit, while in Cieplice-Zdroj, permissible carbon disulfide concentration levels were also exceeded.

Lately, despite industry's expansion, a favorable stability in dust emissions has been observed, as a result of industrial plants being equipped with dust precipitators.

However, prospects are not as bright in controlling emission of gases, especially sulfur dioxide, into the atmosphere, caused by lack of appropriate Polish-made equipment. Few enterprises can afford to import sulfur removal equipment.

Until now, forecasts regarding air pollution have been pessimistic. It was estimated that in 1990, sulfur dioxide emission would amount to 7 million tons [the present figure is 4 million tons]. Will the new plan for Poland's economic development improve that situation? The Environment Inspectorate voices the hope that recently-introduced penalties for polluters will induce industrial plants to install gas filters.

## Silesian Pollution, Health Problems

[Editorial Report] LD021806--Warsaw Domestic Service in Polish at 1700 GMT on 1 August carries a 10-minute program, with poor reception, entitled "When Birds Die." The presenter begins the program by saying: "When birds and animals die, when forests are destroyed, activists from the Nature Protection League and the Society for Protection of Animals become involved. When people start to die, who will speak up for them? According to recent research, between 24 and 430 inhabitants per 100,000 die prematurely in Silesia because of, I quote, the degradation of the natural environment. The death rate there is higher than the national average by 50 percent. It is also estimated that occurrences of circulatory system diseases are more frequent there than in other regions of Poland by 15 percent; there are 30 percent more cases of cancer diseases and almost 50 percent more of pulmonary tract sicknesses. Infant mortality is higher by 13 percent; 9,000 children have a damaged nervous system."

A number of people are then interviewed about the state of health in the region, particularly that of children. A mother says that unless she moves from Silesia her child will soon die. A female journalist who has written a series of articles under the title "Death in Silesia," says that this situation is due to the high extent of industrialization in the region. She says that steps aimed at protecting the environment have not been taken. A female physician says that Silesian children are, on average, stronger than children born elsewhere; if not, the mortality rate among them would be even higher.

The doctor then goes on to say: "Speaking generally, it seems to me that the concept of treating Silesia as a closed industrial region is a very wise one. People should come here to work only for about 20 years. Silesia is not a place to live for children, pregnant women, old people, or people with first signs of cancer, who should undergo intensive cure in an unpolluted environment."

A professor from the Zabrze Internal Diseases Clinic lists the damaging elements to be found in the air. He names Zabrze, Nowy Bytom and other places as being the worst towns in Silesia for pollution, and then goes on to point out the dangers of living for 10 years in an environment with high lead content.

The presenter closes the program by saying: "The report on June 1981 on the state of the environment in the Katowice Voivodship contains the following words: unless environmental pollution is eliminated, further housing construction in almost all towns of the voivodship will require social acceptance of a shorter life, more frequent medical treatment, and acceptance of the risks regarding the extent of the development of the future population."

CSO: 2600/1188

'NOT' LEADERSHIP DENIES THAT ENGINEERS OPPOSE REFORM

Warsaw RZECPOSPOLITA in Polish 1 Jul 83 p 2

[Article by (kb)]

[Text] (From our own correspondent) The Main Council of the Chief Technical Organization [NOT] met in Warsaw on 30 June. The meeting was called in order to review the accomplishments of the governing body of the NOT federation of professional scientific and engineering societies during the first few months of this year. A report on NOT activities during 1982 was also discussed and endorsed, and, in addition, the federation's own resources conservation program was also submitted for debate.

In addressing the substantive issues on the meeting agenda the members of the NOT Main Council discussed the work that is being done by the federation to promote scientific and technological progress in the national economy. As it is already well-known from other press accounts, NOT has drawn up a draft program outlining changes which, in the opinion of engineers and technicians, ought to be made in the institutional machinery of the economic reform program in order to contribute more effectively than has been the case so far toward the mobilization of domestic resources and assets capable of promoting technological progress, a factor which in any event must be regarded as a critical prerequisite for economic growth, improved management efficiency, and, at one and the same time, waging a successful struggle against inflation. This document was submitted for consideration at, among other forums, the meeting of the Economic Reform Commission held on 21 June.

In his address to the Main Council meeting NOT general secretary, Kazimierz Wawrzyniak, made a point of noting that this document was strongly criticized by some members of the Economic Reform Commission. However, the way in which this criticism has been described in the mass media has clearly distorted the main thrust of the ideas contained in the document drafted by NOT. These media accounts suggest in no uncertain terms that both the federation and the engineering profession as a whole are somehow opposed to the economic reform, that they favor the abolition of workers self-management and the institution of public consultations, and that they advocate the reinstatement of the former methods of economic management. Unfortunately, these representations have nothing at all to do with the real intentions or recommendations made by professional scientific and engineering societies and their representatives on the NOT committee for economics and the economic reform.



On this note, it needs to be said in addition, according to Wawrzyniak, that the NOT federation has already expressed its views on the need for economic reform in the form of the resolution passed by last year's Congress of Polish Engineers. And the NOT Executive Board has already taken a position on the manner in which the NOT-sponsored proposals for introducing modifications into the economic reform program were to be presented for consideration. The Main Council supported the position taken by the board.

At the close of the meeting the NOT Main Council gave its strong endorsement to the "Appeal for Life and Peace and Against Nuclear War" issued by the World Peace Assembly in Prague.

CSO: 2600/1187

## OPTIONS FOR SALVAGING SUSPENDED CAPITAL PROJECTS CONSIDERED

Warsaw INWESTYCJA I BUDOWNICTWO in Polish No 3, Mar 83 pp 11-13

[Article by Witold A. Werner]

[Text] Great speed of investing capital, especially in the years 1971-1975 as well as methods of managing the economy and investing activities, combined with the voluntaristic character of many developmental decisions, have contributed to overextending the investment front in our country. Then, especially since the mid-1970's, growing phenomena of lengthening construction cycles, exceeding planned capital investments and their decreasing effectiveness, accompanied by lack of accomplishment of plans of putting them into use, have contributed to the generating of the present socioeconomic crisis.

In this situation, views about the need to continue all of the suspended capital projects as well as about beginning a number of new capital projects exclusively on the basis of decisions of independent, self-governing and self-financing enterprises, cause serious doubts.

First, a number of capital projects turned out to be obsolete or unnecessary because of the changed external circumstances (projects for production based on imported raw materials, e.g., part of the projects in the poultry industry) and, secondly, each government intervenes to a lesser or greater degree in the basic questions connected with the size, structure and location of capital projects in a given country. State interventionism in the West serves the purpose of directing economic development, encouraging or discouraging businessmen from investing, protection of the natural environment, etc.

As a result of faulty functioning of the mechanisms of central monitoring of capital projects, a paradoxical situation developed in Poland. On the one hand there is a huge, but poorly utilized, production potential in the form of a large number of new plants, and on the other, an extensive front of started capital projects as well as pressure to begin new projects. This created the objective necessity to suspend a considerable number of capital projects already under way in order to adjust the investment front to the existing needs and economic possibilities. Operations undertaken in this field have lead to the suspension of approximately 1,600 projects. The decisions on suspending capital projects, taken mainly by ministers and governors, have been the result of putting into practice several consecutive resolutions of the Council of Ministers over the last 3 years.

The last survey of capital projects, done on the basis of ruling No 30 of the president of the Council of Ministers on the survey of capital projects continued in 1981, of 6 August 1981, had the most complex character. Relatively effective work of macroregional and branch teams (as compared with previous surveys) led to the isolation of 296 capital projects, which were suspended following a subsequent resolution of the Council of Ministers.

The resolution of the Council of Ministers No 125 of 31 May 1982 on the destination of suspended capital projects divides them into four basic groups:

--temporarily suspended central capital projects to be resumed with no essential changes in their actual scope according to arising possibilities,

--temporarily suspended capital projects of enterprises and budget units, whose speedy resumption is considered justified depending on the financial possibilities and credit capacity of the enterprises,

--capital projects to be realized after their scope and purpose are changed,

--capital projects to be completely given up.

Pursuant to the powers resulting from this resolution, the Institute of Organization, Management and Economy of Construction Industry has undertaken activities connected with utilizing the suspended construction projects and, in cooperation with the Association of Enterprises for Turnover of Machines and Raw Materials Bomis, activities aiming at utilizing the stock of machines and appliances stored for the realization of these projects.

It should be noted that--apart from several exceptions--the decisions resulting from the quoted resolution concern undertakings of the estimated cost per unit exceeding 50 million zlotys. Moreover, they do not, for various reasons, include a number of big suspended projects. Except for the projects listed in the resolution, 1,300 projects of the estimated value below 50 million zlotys per unit were suspended. It is not possible to estimate accurately the number of suspended projects (those suspended by the decisions of various authorities as well as of the enterprises themselves) since, despite the existing statistical regulations, not all investors report the facts of suspending the realization of capital projects. The skyscraper in Dzierzynski Square in Warsaw, which was not reported as a suspended project, is a characteristic example.

The departments of steel and machine industry have the greatest share in freezing the suspended capital projects (from the point of view of their value) and regionally it is the Katowice Voivodship. This share is determined considerably by the suspended projects in the Katowice Steel Plant.

Attempts at utilizing the suspended projects undertaken by the institute include all the projects that were suspended and are to be realized after their purpose is changed (except for those mentioned below).

Mainly projects of the "line" type (roads, railroads, electric power lines, etc.) have been excluded from the set of projects that can be utilized for other purposes as well as modernization projects and those representing negligible level of advancement. Thus the number of projects which, theoretically, may be utilized for different purposes dropped to approximately 700.

Special "Information cards for suspended capital projects" have been prepared, which obtained the status of a GUS form. The collection of these cards constitute--it is assumed--the basis for the functioning of the bank of information on the possibilities of utilizing the suspended capital projects. These cards have been passed to all the investors mentioned in resolution No 125/82 of the Council of Ministers and to all the heads of central units and voivodes with the request to have them filled for the suspended projects that have not been mentioned in the resolution.

It must be emphasized that the reactions of the addressees (at all levels) to the request to report the suspended projects have been diametrically different, ranging from unusually active to reluctant at best. It is symptomatic that many investors have learned about the possibilities of profitable hand overs and equally profitable take overs of suspended capital projects not from their own founding organs, but from press publications initiated by the institute. This fact demonstrates the lack of discipline on the part of some organs with respect to the realization of government provisions on the one hand, and lack of understanding of the principles of the economic reform and counting on the continuation of the "old" capital policy, i.e. central financing of capital projects, on the other.

Despite the fact that the resolution mentioned above was not published and the information promotion campaign was delayed, and also despite resistance from many investors and their founding organs, almost 400 information cards and reports on capital projects to be utilized for other purposes were obtained until the end of October 1982. This should be considered a success of a kind.

The collection obtained provides a sufficient basis to make some evaluations concerning the status of suspended capital projects as well as to reach conclusions (on the basis of activities aimed at utilizing them that have already been performed) as to the necessary economic and legal instruments that should be introduced to promote a revival of activity in this field.

Constructions advanced up to 50 percent (from the point of view of their value) constitute the largest group (approximately 60 percent) among the suspended projects. Considerably advanced projects (over 80 percent) constitute little over 6 percent of all the reported projects.

Predictions as to further utilization of suspended projects can be determined on the basis of information obtained from the investors:

--41.5 percent of investors predict utilizing the projects for their own purposes,

--40.7 percent of the investors do not see any possibilities of utilizing the suspended projects,

--7.4 percent want to utilize only parts of suspended projects.

Among the group intending to continue the projects for their own purposes, only 37.5 percent have financial means at their disposal and these are usually very limited. Only a fraction of investors have all the means to complete the suspended projects. The remaining investors have only part of the means or they predict that they will have adequate means in the coming years. While waiting for possibilities of completing the suspended projects--as a result of obtaining the necessary means--approximately 44 percent of investors predict the completion of the realized project by 1985 and approximately 30 percent of investors could not define even an approximate date for the continuation and completion of the suspended constructions.

Among the group of investors who do not predict further realization of the projects, 67 percent have already undertaken actions aiming at handing them over (for the time being, a small part of these have been settled with a positive result). These actions consisted mainly in reporting the intent to "get rid" of the suspended project to the local organs of state administration or to the Institute of Organization, Management and Economy of Construction Industry. Undertaking direct negotiations with potential buyers is another form of activity. So far, reporting to the local state administration organs has been the least effective form.

Answering the questionnaire the administrations of departments and voivodships put forth a number of economic, legal and organizational suggestions which should promote quick utilization of the suspended projects after they have been introduced. The most important and most frequently mentioned suggestions were:

--increasing the share of the state budget in the realization of capital projects of special significance (to a greater degree than the decision of the Economic Committee of the Council of Ministers No 41 of 25 June 1982 would suggest),

--considering the possibility of giving tax cuts to enterprises which were given capital projects after the associations of enterprises were liquidated,

--changing the system of providing credits for capital projects by lengthening the periods of payments of the borrowed credit or by extinguishing past debts,

--allowing for the possibility of additional financing from voivodships budgets of projects of construction enterprises, for whom voivodes became the founding organs,

--providing financial assistance to state farming enterprises which have entered the economic reform with a large investment front and are not, as a rule, capable of collecting adequate capital funds; continuation of the already initiated tasks forces these enterprises [PGR] to draw considerable banking

credits, which causes the growth of debt and, more and more often, less of credit capacity.

--appointment of an appropriate organizational unit that would have the powers to change the user, especially in cases when the continuation of the project is scheduled for a distant time in future, since the founding organs are reluctant to hand over suspended projects to other users.

It is postulated that, taking into consideration the problems arising in handing over projects of inventory type to other users, this task should be passed to the local organs of state administration with the aim of transferring them to the State Land Fund, while the capital spent on them is returned to the investors; such action should cause more effective handing over of capital projects to units that will be able to use them for other purposes.

The suggestions mentioned above indicate that the majority of ministries and voivodship administrations aim at receiving additional funds from the central budget in order to finish the suspended projects. Only few heads of these organs believe that presently obligatory legal principles create possibilities of utilizing suspended and abandoned projects in the conditions of the economic reform. These last views emphasize the independence of enterprises to manage their own real estate (in the light of obligatory regulations).

The postulates aiming at simplifying the procedures of handing over suspended projects to new users are legitimate. In some cases, luckily sporadic, it is possible to find "authoritarian" interference on the part of founding organs (governors) in the decisions of enterprises, assuming the form of objections to handing over a project to another user, especially from a different voivodship (this concerns objects which have not been assembled yet or portable ones).

Despite the fact that a relatively short time has elapsed since the resolution 125 of the Council of Ministers and detailed regulations came into force, the process of handing and taking over of projects is developing. Until the end of October 1982 already 80 capital projects have been handed over, including many projects worth several hundred million zlotys. Moreover, lands occupied by suspended projects have been handed over for agricultural purposes.

The actual result of utilizing suspended projects is the process of adapting them for transport service and repair centers (repair of railway carriages, machinery and parts centers, automobile centers, etc.), for production (furniture, drugs, building materials, clothing, string for binders, etc.), warehouses, medical facilities (health centers, hospital, hotel for nurses, etc.), as well as for educational, commercial and other purposes.

After the approval of appropriate organs of state administration, a dozen or so suspended projects were handed over free, several at costs lower than those of the investor, and most of them at "prime cost," i.e. according to the level of prices in 1978. Only in three cases were the selling price higher than that

paid by the investor. If we consider that the so called multiplier M-82 (indicator updating prices for construction work from 1978 to the level of 1982) oscillates on the level of approximately 3, it becomes clear that the buyers of suspended projects are making good business paying for them the prices of 1978.

This observation gains value in confrontation with the list of buyers and prospective buyers of the suspended capital projects. From the first contacts with potential buyers, who come to the Institute of Organization, Management and Economics of Construction Industry, it is clear already that they are firms with energetic managements, independent and understanding the essence of the economic reform. It may be generalized that they are firms which see their future in the economy functioning in reformed conditions.

In view of the quick decapitalization of projects that have not been utilized and, at the same time, the need for developing socially desirable production and services, the status of the buyer (state enterprise, cooperative, Polish emigre firm or artisan) seems to be less essential, if production or services are undertaken, which are socially justified. It must also be emphasized that the problem of flow of real estate (as well as suspended projects which are not considered real estate yet) between sectors is not interpreted univocally. Especially the problem of the share of western firms in utilizing (completing, adaptation for other purposes, etc.) the suspended capital projects requires general legislative regulations.

12417

CSO: 2600/1086

## BRIEFS

TRYBUNA LUDU EDITOR ON REFORM--This week there is going to be a lot of talk about the economic reform. This will be in reaction to both yesterday's Government Presidium session and also the Sejm session which is opening today. There are people who claim that the economic reform, which makes business enterprises autonomous, self-managing, and self-financing, will not pass the test. They say that we should consider making changes and passing amendments to laws which will have the result of resurrecting practices followed in the past to run the economy. As if we were not aware of the costs, of the price that had to be paid for the command-directive mode of economic management. Other people, those who have run out of patience, believe that too much time has passed and the reform still has not produced any tangible benefits. In the first place, it has produced benefits, if only in the form of a different way of thinking about the economy. In the second place, the economic reform is not a magic wand. The restructuring of the economy is bound to take time. To be sure, the reform should be modified to accommodate changing conditions. But, at the same time, people should be aware of what has been accomplished already. [Text] [Warsaw TRYBUNA LUDU in Polish 28 Jun 83 p 1]

CAUSES OF FIRES IN TEXTILE PLANTS CONSIDERED--A series of five big fires has swept through the country's textile plants in recent months. Two of them broke out in Lodz after there had been one each in Staszow, Wejherow, and Krakow. In Krakow's Vistula Clothing Plant 280 million worth of raw materials and finished clothing went up in flames. In the opinion of the investigators and the fire brigade, such a series of fires cannot be accidental. It is conjectured that the cause of the fires was in all cases the self-ignition of tailoring accessories manufactured from synthetic materials, which replace the conventional materials, buttons, zippers, and so forth that have been used up to now. The investigation has still not been completed. However, its results so far have required that all textile plants should take greater anti-fire precautions. The precautionary situation has been none too good, as evidenced by the case of the Vistula fire where the super-modern smoke-detector apparatus was not functioning and the alarm system was switched off. A special investigation is being made into this case. [Text] [AU211607 Warsaw TRYBUNA LUDU in Polish 16-17 Jul 83 p 8]



## PROPOSALS FOR IMPROVING IMPORT SYSTEM

Bucharest REVISTA ECONOMICA in Romanian No 25, 24 Jun 83 pp 10-11

[Article by George Haseganu: "Qualitative Aspects of the Rationalization of Imports"]

[Text] An area of investigation not tackled much thus far, the problem of the expenditures in valuta for imported technical assistance raises a number of aspects of great importance for the efficiency of foreign-trade activity. The conclusions resulting from the analysis of 62 investment facilities having this specific character, and the proposals advanced on this basis, offer the possibility of taking steps that would lead to growth in the efficiency of the productive investments as a whole.

For diagnosing this sector of activity, research on the subject was performed on a sample representing investment facilities achieved during a decade and a half within the MICM [Ministry of the Machine Building Industry], the MIM [Ministry of the Metallurgical Industry], the MICH [Ministry of the Chemical Industry], the MIU [Ministry of Light Industry] and the MEFMC [Ministry of Forestry Economy and Construction Materials], facilities at which the value of the importation contracts concluded with various foreign suppliers represented 26 percent of the total value of the investments achieved (see the table). Both through importation's percentage in the total investments and through the specific character of the contracts analyzed, we feel that the sample was representative and the conclusions are valid for the whole Romanian economy, in the current stage.

#### The Structure of the Technical Assistance Services

Depending on the complexity of the actions needed for putting into operation the equipment procured through importation and keeping it in operation at the levels of maximum efficiency, the analysis of the facilities studied revealed the fact that, as a rule, assembly represents the most costly stage, both through its duration in time and through the number of specialized personnel required.

Comparing the assembly activity's percentage in the total duration of the technical assistance according to the main customers, one finds that assembly attains a level of about 60 percent for the whole sample, with the levels varying

from 37 percent for the MICM to 93 percent for the MIU, with the levels for the other ministries being the following: 58 percent for the MICH, 65 percent for the MEFMC and 66 percent for the MIM (see the graph not reproduced).

Table 1. The Percentage of the Valuta Expenditures Made in Connection with the Importation of Equipment for Investments, with the Particularization of Those Involving the Technical Assistance Given by the Specialists of the Supplying Foreign Firms

<u>Minis-tries Ana-lyzed</u>	<u>Number of Facilities in the Sample Analyzed</u>	<u>Percentage of the Value of the Equipment-Importation Contracts in the Total Value of the Investments</u>	<u>Percentage of the Value of the Technical Assistance in the Value of the Equipment-Importation Contracts</u>
MICH	17	30.00	6.90
MIM	10	25.80	2.50
MICM	12	17.10	12.80
MIU	6	24.50	0.07
MEFMC	17	22.80	2.80
Total	62	26.00	6.1

The technological and technical tests, without attaining assembly's percentage, also have high levels--36 percent overall, varying between 27 percent (MEFMC) and 43 percent (MICM).

Regarding the duration of the phases of demonstrating the parameters stipulated by contract and of putting into operation the equipment bought, it varies between 1 percent (MIM) and 8 percent (MEFMC), it being 5 percent on the average for the sample.

The above structural analysis reveals the phases for which the majority of the funds in valuta are spent to pay for imported technical-assistance services, also indicating, in fact, the field to which maximum attention had to be given in the investigation made.

#### The Necessity of Professionalism in Contracting

The concerns regarding the achievement of as high efficiency as possible for the facilities that use technical assistance and imported equipment must be concretized particularly in the criteria of choice regarding the signing of contracts with one foreign supplier or another. In this regard, besides seriousness in contractual dealings, their technical experience--verified beforehand, in practice--constitutes an essential element, a premise for success with the investment. Contrariwise, the concluding of contracts with suppliers who do not yet have clear the technical and technological image of the installation on exportation can become a serious source of delays and extra expenses, not to mention the risk that the buyer assumes of "financing" his supplier's "own schooling." The concluding of contracts with foreign partners, for achieving high-capacity installations, just on the basis of pilot or lower-capacity plants achieved on other markets, is of a nature to incur unforeseeable risks and, consequently, losses for the buyers. In this situation, the prolongation

of the various phases of technical assistance--of the assembly, in particular--is very probable, with the inherent jump in uneconomical expenses in valuta. It has been found in international practice that uneconomical expenses can also arise as a result of contracting for imports of equipment and technical-assistance services with too great a number of foreign suppliers, as part of the same installation, which is of a nature to "chop up" the responsibility for the proper functioning of the whole installation.

The essential elements, such as the technical assistance's duration, overall and according to phases of achievement, the number of specialists and their quality, and so on, must turn up in the contractual clauses--since elements not set, as such, in advance, but resulting a posteriori from totaling the payment documents, can lead to an increase in costs. The final indicators for acceptance of the contractual installation are not permitted to be missing from these clauses. The practice of the execution of technical-assistance contracts has demonstrated, more than once, the fact that sometimes the periods of assistance and the number of specialists are overestimated in the initial bids--with the actual achievement of the respective services being done with much smaller efforts.

It is necessary for the domestic customer to have an accurate record--neat and up to date--in connection with the work that, eventually, he does on the foreign supplier's account (repairs and so on), an act that, later, would permit him to have the basis for charging the respective services to the foreign supplier, with a view to collecting their value in valuta. In the absence of accurate records or for other reasons, sometimes, the customer does not request, attentively and promptly, the monetary rights that are due him from the supplier, as indemnities and other damages--losses caused either by delays in delivering the equipment or by the failure to provide the services stipulated by contract.

Because of these poorly kept records--and other reasons devolving upon the customer--the Romanian party has been, not rarely, in the situation of receiving only partly--and, at other times, not at all--the rights due it by contract in connection with the guarantee period. For a multitude of subjective reasons, the customer has not always managed to provide a perfect correlation in the equipment contracting that he initiated, both for Romanian accessories and for those from abroad--with the discrepancies leading to serious tieups of funds and even to physical deterioration of the equipment.

Another group of deficiencies are due to the foreign suppliers. In this regard, lateness in the delivery of equipment from abroad, by various foreign firms, has constituted a prime cause of extra expenses, owing to the prolongation caused. The deliveries of equipment that needs corrections occupy a place by themselves among the supplier-caused reasons generating expenses for additional technical assistance, such situations presupposing, when possible, its correction right at the worksite, either by the supplier or by the customer, but at the former's expense, or entailing extra time, necessary for returning it to the supplier for repair.

Part of the loans for imports refer directly to technical assistance. The reduction of these payments, through the promotion of Romanian technical

creativity and through the sensible negotiation of the importation contracts and the concluding of them, by means of more effective collaboration among all the factors involved in achieving the investment facilities, the direct customers and the foreign trade enterprises, is necessarily called for, constituting a way to both introduce advanced technology and develop international economic cooperation. Consequently, the field of technical assistance represents a sector of activity susceptible to being made more efficient, through the promotion of measures capable of increasing the size of the ratio between the effort (the valuta effort, in particular) and the results, with their very diversified area of inclusion.

## Proposals

In order to personally interest the foreign supplier in achieving first-rate technical assistance within the period set by contract, it is necessary, in the bilateral negotiations, to obtain the inclusion--without exception--of a clause according to which, as part of the scheduled loan payments, the payment of an installment (amounting to about 5-10 percent of the price of the importation contract) is to be made only after the time of acceptance of the installation. In this regard, the practical result could be obtained by putting on the foreign supplier the condition that, in collecting these installments, he also present to the paying bank--in the set of documents required--certified photocopies of the buyer's written confirmation that would attest that the delay in acceptance was not due to causes imputable to the foreign supplier. For the case when the payment would be made without the final acceptance having been achieved, there should be inserted in the bilateral contract an additional clause according to which the supplier still remains obligated to the buyer--for x months after his last actual delivery of equipment--to demonstrate the installations's parameters guaranteed by means of the technical specifications in the contract. In this period of x months, the customer would have the obligation to eliminate all the causes that prevented acceptance, thus offering the supplier the possibility of demonstrating the parameters in the contract.

In order to avoid later disagreements between the contracting parties, it is necessary, by means of an express clause in the contract in connection with acceptance of the installation, to define "the assembly-termination stage," the time of the start of the mechanical and technological tests, and the methods of performing them. Before the signing of the assembly-termination protocol, a careful physical and value check of the equipment delivered by the foreign suppliers should be made, in the sense of ascertaining whether the seller delivered all the equipment, in conformity with the specifications in the contract, whether this equipment corresponds technically to the appendices in the contract, whether, in its degree of precision, the measurement and control apparatus correspond to the proper functioning of the installation and, in general, whether the equipment received operates correctly, this being done by means of idling tests.

Both the qualitative check and the quantitative check should always be made in the presence of the representatives of both parties, the results should be recorded in written documents and, in the case in which discrepancies are found, by comparison with the provisions in the contract, they should be reported to

the foreign supplier with a view to their immediate resolution--also at his expense. The contract should also stipulate the express necessity that the Romanian party provide execution personnel, tools, the devices needed for doing the assembly, performing the tests and putting the installation into operation, and auxiliary raw materials, and the effective fulfillment of these obligations be pursued.

For legally ascertaining the acceptance of the installation, there should be drawn up acceptance reports or, in the case when the foreign supplier has not demonstrated the parameters stipulated by contract, the ascertaining reports in which, under the signatures of all the delegates legally necessary to be present, there should be specified: the duration of the test, the conditions under which it was conducted, what contractual parameters had to be achieved and what results were obtained, observations about the behavior of the equipment, with specification of the deficiencies found, and conclusions regarding whether or not the acceptance is considered a success. These documents should also be forwarded--mandatorily--to the importing foreign trade enterprise with a view to pursuing the supplier for payment or for making the corrections that are called for.

12105

CSO: 2700/275

DECREE SETS MEASURES TO REDUCE RAW MATERIAL CONSUMPTION

Bucharest BULETINUL OFICIAL in Romanian Part I No 41, 18 Jun 83 pp 1, 2

/Text/ Decree of the Council of State concerning the establishment of product and delivery prices by the linear meter, the square meter, or the piece with a view to reducing consumption of products and raw materials. The Council of State of the Socialist Republic of Romania decrees that:

Art 1.--With a view to better meeting the demands of the national economy concerning the requirements for products and raw materials and for improving economic efficiency, the ministries and other central and local organs of government which command production units will take measures to reduce consumption of products and raw materials and to bring about more efficient utilization of the planned quantities of materials.

Art 2.--For the products which form part of the groups of products mentioned in the annex to this decree, the ministries and other central and local government production organs will establish, in accordance with the State Committee for Prices, product and delivery prices by the linear meter, the square meter, or the piece, that will reduce consumption of products and raw materials.

Art 3.--The following criteria will be considered in establishing the product and delivery prices in the new units of measure provided for by Art 2:

- a) The maintenance of the current general price;
- b) The incentive for producers to make products of a size and tolerance that will lead to the more effective use of the same quantities of materials;
- c) The involvement of beneficiaries in the use of materials of a size and tolerance that will permit production of finished goods with equal or improved functional-technical parameters with a smaller quantity of materials and with reduced prices.

Art 4.--The new product and delivery prices established in accordance with the provisions of Art, 2 and 3 will go into effect within 30 days of approval of this decree.

Art 5.--Until 30 December 1983, the State Committee for Prices, the State Committee for Planning and the Finance Ministry will analyze, together with the production ministries, the results of the application of prices in the new units of measure and will present possible suggestions to improve the approved pricing system and extend the pricing in the new units of measure to other products.

Art 6.--The production ministries will take measures to make products in a structure corresponding to the prices established in the new units of measure so that delivery of all varieties requested by consumers will be assured.

Art 7.--For the products which have prices established in the new units of measure, the production ministries will work to re-examine the consumption of materials with a view to reducing it.

Art 8.--With a view to guaranteeing conditions for strict control, the administration of materials and products will be made in the units of measure utilized on the date of this decree so that both units of measure will be written on the invoice, while the delivery discount for domestic consumers will be made on the basis of the prices established in the new units of measure.

For products destined for export, deliveries will be made in the units of measure agreed upon in the contract with the foreign partner.

Art 9.--The National Council for Science and Technology, together with the ministries and other central production organs, will take measures to re-examine the standards and other quality parameters for products for which current standards of technical quality and size do not stimulate reduced consumption of materials in the product unit and will work out proposals for necessary modifications within 60 days of the approval of this decree.

NICOLAE CEAUSESCU

Bucharest, 16 Juen 1983

President

No 201

Socialist Republic of Romania

#### Annex

List of product groups, prices for which will be established by the linear meter, the square meter, or the piece

No	Ministry/Group of products	Unit of measure in which prices will be established
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#### A. Metallurgical industry ministry

1.	Hot-rolled heavy structures	m
2.	Hot-rolled medium and light structures	m
3.	Rolled machine tool steel bars	m
4.	Heavy and medium hot-rolled steel tables and benches	m <sup>2</sup>
5.	Thin hot-rolled steel tables and benches	m <sup>2</sup>

No	Ministry/Group of products	Unit of measure in which prices will be established
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A. Metallurgical industry ministry (cont'd)

6.	Cold-rolled steel tables and benches	m <sup>2</sup>
7.	Galvanized tables and benches	m <sup>2</sup>
8.	Sealed tables and benches	m <sup>2</sup>
9.	Tinned tables and benches	m <sup>2</sup>
10.	Aluminum piping for irrigation	m

B. Chemical industry ministry

11.	PVC plastic foil	m <sup>2</sup>
12.	Low density all-purpose polyethylene foil	m <sup>2</sup>
13.	Low density polyethylene foil for solariums	m <sup>2</sup>
14.	High density polyethylene foil	m <sup>2</sup>
15.	Low density polyethylene industrial sacks	piece
16.	Low density thin polyethylene sacks	piece
17.	Rubber transport benches	m <sup>2</sup>

C. Construction materials and wood industry ministry

18.	Paper	m <sup>2</sup>
19.	Pasteboard and cardboard	m <sup>2</sup>
20.	Lumber	m <sup>2</sup>
21.	Wood and p.f.l. <u>[abbreviation unknown]</u> plywood	m <sup>2</sup>
22.	Paper bags	piece

Note: Prices are being established in the new units of measure shown in the last column for all product groups listed.

9794

CSO: 2700/262



## EXPANSION OF HYDROPOWER SYSTEMS PLANNED

Bucharest REVISTA ECONOMICA in Romanian No 25, 24 Jun 83 pp 3-4

[Article by Ion Leustean, director, and Iosif Kaytar, Institute for Hydropower Studies and Designs: "The Harnessing of Water's Potential for Hydropower"; passages enclosed in slantlines printed in boldface/

[Text/ One of the main ways to fulfill the task, outlined by the 12th RCP Congress, that, in the current decade, Romania is to become independent from an energy viewpoint is connected with intensifying the harnessing of the country's hydropower potential.

The inexhaustible and regenerable character of the electric power produced by hydroelectric power stations, the high outputs that are obtained by turning water's energy into electric power, the long lifespan of the hydropower facilities, the low operating expenses and the small number of operating personnel, and the wide possibilities of automation and remote control cause this energy to occupy further a very important place in the country's energy balance. The party and state documents provide that there is to be secured the rise from a 30-percent degree of utilization of the national hydropower potential in 1980 to 41-45 percent in 1985 and 57-65 percent in 1990, there being foreseen by the year 2000 the complete utilization of the hydropower potential economically suitable for harnessing that our country possesses. In 1990, nearly one-fourth of the output of electric power is to be produced in hydroelectric power stations (table).

Output	1981		1985		1990	
	Total	Achieved %	Total	%	Total	%
Total electricity output (millions of kwh per year), including in:	70,100	100	79,000	100	97,000	100
Hydroelectric power stations (millions of kwh per year)	12,600	18.0	16,300	20.6	23,000	23.7

In the 1950-1982 period, serious steps were taken to harness for hydropower important rivers and streams like the Danube, Siret, Arges, Olt, Someș and so on, which now--through high- or low-head power stations--are feeding cheap and

first-rate electric power into the national system. It can be judged that we now have /a national school in hydropower facilities/ (design, execution and operation), /a conception of our own regarding the harnessing schemes adopted/, the size of the main facilities, the degree of equipping of the power station and so on. It is not possible to overlook, either, the fact that in achieving the hydropower facilities the needs of navigation have been taken into account, and other important uses like irrigation, water supplies and flood prevention are benefiting each year from a storage capacity in lakes of about 6 billion cubic meters of water.

Speaking about the country's hydropower potential (technically suitable for harnessing), one notes that Romania is situated at the level of the average potential of European countries; if we relate it to the country's area, the specific hydropower potential is at the level of countries like France, Greece, Italy, Portugal, Turkey and Spain and below that of Sweden and Austria, it being, at the same time, higher or much higher than that of countries like Denmark, Finland, Hungary, Poland, the FRG and Czechoslovakia. This hydropower potential comes mainly from the Danube River's hydropower energy, evaluated at 12 billion kilowatt-hours per year, from the potential of the country's inland rivers, amounting to 26 billion kilowatt-hours per year, and from the potential of the small rivers, not included in the harnessing schemes, estimated at a value of 2 billion kilowatt-hours per year. However, this potential of 40 billion kilowatt-hours per year has a transient, statistical character, increasing as the calculations, especially on the small rivers, are refined, but decreasing with the growth in water consumption for uses other than electricity production. In addition, it is strongly influenced by the pluviometric regime.

The intensification of the harnessing of the country's hydropower potential has also necessitated the taking of steps to set up micro hydroelectric power stations on the small rivers that have not been included in the framework schemes. In this regard, the potential suitable for harnessing by means of micro hydroelectric power stations was inventoried in 1981-1982, with proposals being made for building about 700 micro hydroelectric power stations in this 5-year period. The newly installed power in micro hydroelectric power stations will be 160 megawatts in 1981-1985. This action will be done on the basis of standardized construction documentation drawn up by the Institute for Hydropower Studies and Designs and standardized equipment, under current execution at the MICM /Ministry of the Machine Building Industry/. The facilities are expected to be executed on a local level with local materials, being, in general, connected to the system and having an advanced degree of automation and remote control.

#### The Complex Use of Water Resources

Water constitutes a great national wealth; in view of its limited character, however, it must be utilized rationally, in order to satisfy all the needs of the national economy. To this end, the National Program for Arranging the Country's Hydrographic Basins was drawn up in 1976, a document that contains a general conception of harnessing water's potential, the stages and means needed and the correlation of all water uses. From the program there results the tendency to accentuate in the future the complex use of the facilities, sometimes to the detriment of electricity production, especially if these uses have not

been correlated from the outset, that is, from the phase of promoting and approving the hydropower facility.

The repeated emphasis on /the necessity of correlating the program for use of water for irrigation, water supplies, flood control, pisciculture and so on with the hydropower program/, especially in the current stage, when this program is a priority in the economy, is no accident. The achievement of an installed power 3 times higher in the current 5-year period than that achieved in the preceding 5-year period and the creation of the conditions for putting new capacities into operation in the 1986-1990 period require the taking of a group of steps at the level of the whole national economy and the involvement of all the factors in implementing them. In conformity with the directives of the 12th RCP Congress, there is provision for the priority promotion of those hydrotechnical facilities that satisfy at the same time both the interests of the complex water uses in the zone of the proposed facility and the uses for electricity production. The directives stipulate that the entire hydropower potential suitable for harnessing is to be concluded by the year 2000, while the program for arranging the hydrographic basins stipulates the year 2010 as a final stage. The fact should be mentioned that a number of hydropower facilities with a pronounced character of complex harnessing (on the Olt, Siret and other rivers) cannot be promoted except by also taking consideration the technical and economic effect of complex use.

Starting from these considerations, it must be stated that the program for completely harnessing the hydropower potential by the year 2000 requires reconciliation with the program for arranging the hydrographic basins, which stipulates the year 2010 as a final date, in order to avoid noncorrelations, which can lead to nonsimultaneity in the introduction into the plan, the execution and the putting into operation, to difficulties and delays in giving advice on the documentation, in approving and tackling it. The Institute for Hydropower Studies and Designs, as a general design body of the Ministry of Electric Power, also has in view solutions for doing the work in stages, with the postponement of work for achieving the storage lakes and the strictly hydropower utilization of the river course in mind, but these solutions are used only as temporary solutions, because, although they are more economical for the time being, they must be avoided, as they do not deal with the prospective water needs of the complex uses.

In solving this problem it could be of real interest /to draw up and approve at the level of the central bodies for direction and synthesis a unanimously accepted methodology of parceling out the investments according to the uses that they serve, with the indication of the economic efficiency which it brings to each particular use and which would have technical and economic indicators of its own/. This problem--solved now only in principle--can open up important ways both in the promotion of the complex facilities and in the efficient utilization of water resources for each use.

How Is the Investment Work Going?

Regarding the investments in hydropower facilities, the following phenomena come to the fore: as time passes, the hydroelectric power stations are chosen

and put into operation in decreasing order of their economic efficiency--that is, first the most favorable locations, with the smallest volumes of work, with the lowest production cost of the electricity produced, are promoted, then the hydroelectric power stations with bigger and bigger volumes of work and more and more unfavorable geomorphological conditions are promoted. Even under these conditions, when the favorable effects of promoting the CHE hydroelectric power station resulting from the rise in the price of fuel on the world market, contraposed with the qualitative depreciation of the remaining locations, are not totally offset, the price of the electricity produced by the CHE--although evolving in the sense of rising--remains competitive in comparison to other sources. At the same time, the total investments in 5 years (1980-1985) exceed in size the total investments made in 30 years (1951-1980). Along with the growth of the investments, the volumes of work are also increasing substantially and thus it is necessary to increase accordingly the supply of equipment for the builder and to increase the number of specialized design and execution personnel.

The problem of executing the investments remains open. The value of the construction-assembly work in 1985 will be double that in 1982. To these investments there also correspond certain volumes of work, which also include, besides the hydropower setup proper, a big volume of work on roads, powerlines and quarries and site-organization work, much of it having to be planned, advised and executed before the hydroelectric power station. For achieving the proposed rate of harnessing, it would be of great use /if this work could be done in advance/, eventually by a builder who would specialize in work of this sort, with the general builder thus being able to be relieved of a large part of the necessary work.

In addition, it would also be of real benefit to materialize proposals made during the discussions in the sections of the national conference, of which we mention: /the speedup of the design and manufacture of high-capacity and highly reliable equipment needed particularly for high-volume work and for that underground (galleries, shafts, caverns and so on), or the proposal that the machine-building units be responsible for the equipment that they make up to the attainment of the projected parameters/. For speeding up the work it would be useful for /the enterprises supplying construction equipment to have on the big hydropower worksites strong service units capable of doing the necessary maintenance and repairs on the equipment built/. Obviously, until the design and execution forces are increased to the level needed for the tasks, the problem of /concentrating the design and execution forces on the facilities now under execution, which have dates for going into operation in the upcoming years/, remains open. At the same time, the existence of a long-term timetable for delivering the electromechanical equipment between the MEE Ministry of Electric Power and the MICM seems necessary, knowing that the assimilation of new equipment is also necessary, which requires the tackling of its conception and approval right now.

In order to provide the documentation for the big hydropower facilities, exacting work is being done to continue the action of standardizing the designs and of adopting in the designs drawn up solutions that would permit the reduction of the consumption of cement, metal, wood and other energy-intensive materials;

at the same time, the aim is to increase the degree of industrialization of the work and to reduce the areas of land occupied by the hydrotechnical facilities, especially the storage lake.

Owing to the extensive land-study, research and design work that the hydropower and hydrotechnical facilities require, for specifying the foundation conditions and the characteristics of the materials used, and the involvement of important economic branches, the necessity of revising and improving the program for achieving the hydroelectric power stations, a program that should coordinate all the activities both as to specialties and as to time, seems obvious.

12105

CS0: 2700/275

## MEASURES TO INCREASE COKING COAL PRODUCTION

Bucharest REVISTA ECONOMICA in Romanian No 25, 24 Jun 83 pp 1-2

[Article by Dorin Gheta and Cornel Vasile: "Growth in Coking Coal Production--a Major Objective"; passages enclosed in slantlines printed in boldface/

[Text/ One of the priority tasks in the country's economic activity is that referring to strong development of the base of mineral raw materials--in particular, faster growth in coal production. Acting in the spirit of the tasks outlined by the party, the country's miners have managed to obtain remarkable results this year, especially since February, when the application of the new work program in mining was undertaken: 3,857,000 tons more of coal were furnished to the economy in the first 5 months of 1983 than in the January-May period of last year. Although not all units attained the provisions of the above-mentioned period, the majority of the staffs of miners fulfilled and overfulfilled the tasks that fell to them, managing to extract and to put at the national economy's disposal, additionally, big quantities of coal. Among them are the Ploiesti, Valea Jiului and Motru combines and the Horezu, Salaj, Voievozi and Comanesti enterprises. In the baring work done in order to prepare new deposits for extraction, the production plan was overfulfilled by over 2.3 million tons of rock.

These are excellent results, indeed--ones that must be greatly increased, however, so that in the second half of the current year it will be possible to attain the objective of achieving daily an output of 200,000 tons of coal. The further mobilization of the available technical potential, the preparation of new exploitable working faces in advance, the expansion of overall piecework, the raising of the indices of utilization of the mechanized complexes, the utilization of advanced technologies suited to the specific character of the activity, and so on--all can contribute to the exemplary fulfillment and even the overfulfillment of the daily plan targets.

In this context, /faster growth in coking-coal production is of particular importance/. Big tasks in this field go to the units that belong to the Valea Jiului Coal Combine. "We must act in the field of the coal industry," Comrade Nicolae Ceausescu emphasized at the Work Conference of the RCP Central Committee on the Problems of Industry and Agriculture, "to secure the complete fulfillment of the plan--and we have all the conditions to obtain an additional output of coal.... In the ensuing months, it is necessary not only to secure

the fulfillment of the plan but also to act to make up the shortfalls from the first months, that is, the nearly 300,000 tons of coking coal." Consequently, what is being done at the mining operations so that the coal output extracted daily may attain the stipulated levels and in order to make up and fulfill the output of coking coal?

Valea Jiului is the country's main producer of coking coal. For attaining the stipulated production levels, the mining enterprises in Valea Jiului have the necessary technical base provided, concretized in highly productive mechanized means, highly skilled worker personnel and advanced technologies suited to the specific character of the different operations.

For instance, the value of the fixed assets of the CMVJ /Valea Jiului Mining Combine/ represents 440,000 lei per working person--almost 2 times more than the national average in the mining industry. In the inventory of the mining enterprises there are: 51 complexes for mechanized support and cutting, 55 cutter-loaders for faces with individual support, 64 cutter-loaders for advancing in coal and rock, 13 remote firedamp-sensing installations, a medium-sized computer center equipped with computers of our own make, equipment for topographical tracing, perforators and verifiers with which are projected, implemented and processed data in the field of technical preparation for production, the scheduling and supervision of production, the technical-material supply, personnel and pay, and so on. To all these we must also add an extremely important aspect: after the Work Conference of the RCP Central Committee with Management Personnel, Specialists and Workers in the Mining Industry and Geology, the Valea Jiului Mining Combine and the mining enterprises are benefiting from a complex program of measures adopted by the party and state leadership.

In order to use the production capacities as fully as possible and provide good conditions for resting the work force, a more rational work program, suited to the specific character of the labor in the extractive industry, was undertaken in February of this year in mining activity. Thus, underground, the labor of the worker personnel was organized into three shifts of 8 hours each per day, with a schedule of 5 workdays per week in the mines with hard working conditions and of 46 hours per week in the other units. As practice demonstrates, the transition to the new work program has many advantages: the possibility of ending the production cycles on each shift, the reduction of the number of entries into and exits from mines by the personnel and the better utilization of the technical base on hand and of the worktime.

Using to the utmost the new working conditions created, /the mining operations in Valea Jiului, in only 4 months, managed to raise by over 36 percent the labor productivity at the faces equipped with mechanized complexes/. The coal output extracted daily on the average with each complex rose more than 9 percent. Under such conditions, Valea Jiului's miners managed to furnish to the economy--direct to the iron and steel industry--much greater quantities of coking coal than in the same period of last year. Nevertheless, the levels set in the plan were not attained. True, in the same period, the net physical output was overfulfilled, but, analyzing the structure of this indicator, shortfalls result for washed coal for coke and washed coal for semicoke.

The causes that led to the failure to fulfill the extracted gross output are diverse: the nonconfirmation of reserves owing to the geotectonic conditions of deposit formation (the Lonea and Petrila-Barbateni mines and the Hobiceni mining field), the failure to provide mining equipment and supplies on time (of eight mechanized complexes due to be delivered in the first half of 1983, only one SMA-2 complex has been received thus far and the Timisoara IM [expansion unknown] has delivered only two CI-2 advancing cutter-loaders of the six stipulated by contract, there being added to these things delays in providing the number of conveyors stipulated by contract, mine hoists, electropneumatic fans, 430 tons of mining-type rubber matting, 86 km of electric cable and big quantities of construction pipe for hydraulic props and high-pressure hose) and so on.

Besides these causes, which also could have been prevented by means of proper steps taken in time, there are also others that belong directly to the production units: the faulty functioning of equipment on the technological flows (flight conveyors, belt conveyors, face cutter-loaders, advancing cutter-loaders and so on); the existence of mismatches of capacities on the transportation flows (the Livezeni, Aninoasa, Lupeni and Uricani mines); the failure to do at the proper time and with the proper quality the maintenance and repair work on technological installations and equipment; deficiencies in organizing and running the production processes, especially in regard to steadily supplying the necessities to the work formations and utilizing the work force; and so on.

The analysis of the activity--in the light of the tasks set at the last work conference of the RCP Central Committee--indicated that both at each operation and at the level of the combine the initial measures established this year in order to fulfill the plan should be revised and new actions should be established for utilizing with maximum effectiveness both the mechanized means and the work force. Among the most important technical and organizational measures established there are: /the matter of putting into operation at intervals during the 2d half of the year 13 mechanized complexes, 5 advancing cutter-loaders, 20 normal faces with individual support/ (some equipped with cutter-loaders) /and panel workings; the creation of new flows of belt conveyors for the concentration of production; the matter of keeping in operation at each enterprise the number of face and heading cutter-loaders/ (of those existing) /corresponding to the requirements for fulfilling the plan targets and making up the shortfalls/. The measures to mechanize some work represent an example in this regard. There was undertaken recently the replacement of the old, lighter sections, used to support the mineworks, with heavier sections, which, owing to greater strength, can be used in smaller numbers for such work, a fact that leads to the obtaining of big savings and to the growth of the safety factor of the support works. However, the installation of the new sections requires much greater physical effort on the part of the miners. The problem was solved by specialists in Valea Jiului--researchers, designers and builders of mining equipment--through the achievement of a machine, called the MMA-500, with whose help the work is done in a mechanized manner, with the physical effort for the work being reduced. They are using such equipment at present to execute the support works in galleries at the Dilja, Lupeni and Uricani mining enterprises, with it coming to be used also at the other operations in Valea Jiului.



/To increase the labor productivity underground, the implementation of the programs for small-scale mechanization drawn up at the level of each mining enterprise will also be pursued, among other things, with a special accent being put on expanding the utilization of the monorail installations, for improving the supply of support materials and spare parts for the work formations/. The existing work force will be redistributed to the directly productive workplaces in order to increase the coal output.

As regards /compliance with the planned quality indices/, the mining enterprises will take steps to follow strictly their own programs of measures set up, with details on dates and responsibilities concerning: the placement of the sorting points, the separation and deposition of the rock on the floor at all mechanized faces, and the selective blasting in the preparatory work in a mixture (rock and coal in the same face); the separation of the rock-carrying flows from the coal-carrying flows in all opening and preparatory work that will be done.

But in order for the efficiency of the measures proposed by the Valea Jiului Mining Combine to attain the desired level--the fulfillment of the plan provisions and the recovery of the shortfalls--it is necessary for the help of collaborators to also make itself felt more. In this regard there is in mind a bigger contribution from the units of the MICM /Ministry of the Machine Building Industry/, the MIMUEE /Ministry of the Machine Tool Industry, Electrical Engineering and Electronics/ and the MICH /Ministry of the Chemical Industry/ to providing the materials and spare parts stipulated by contract for 1983, without which the maintenance and repair of the equipment cannot be done at the proper time, with maximum effectiveness and at a high-quality level.

The matter of pursuing with greater exactingness and responsibility the materialization of these measures will undoubtedly lead to growth in the production of coal for coke extracted from Valea Jiului's faces. The miners at this field, the leaders of the production process, have the necessary capacity to overcome the existing shortcomings, in order to give the country, Romanian ferrous metallurgy, more and good-quality coal for coke.

12105

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DECREE ON DANUBE DELTA DEVELOPMENT PROGRAM

Bucharest BULETINUL OFICIAL in Romanian Part 1 No 17, 28 Mar 83 pp 1, 2

/Decree No 92 of the State Council on the Danube Delta Integral Planning and Use Program/

/Text/ The State Council of the Socialist Republic of Romania decrees:

Article 1.--The Danube Delta Integral Planning and Use Program is approved. The program is set forth in the annex\* which is an integral part of this decree.

Article 2.--Based on an in the implementation of the Danube Delta Integral Planning and Use Program provisions, steps will be taken to:

A. Within 60 days of the date of this decree, establish:

--the technical-economic documentation on the processing of reed cellulose with small enterprises situated in the delta, to be prepared by the ministry of wood Industry and construction materials;

--the most productive species for wood production in the delta environment, to be prepared by the ministry of silviculture;

--a program to develop tourism, to be prepared by the ministry of tourism;

--a research program to introduce the use of unconventional energy sources (solar and wind) in the economic enterprises and localities in the delta, to be prepared by the ministry of electric power;

--a program using professional schools to provide and train cadres in accordance with the manpower needs established by the Danube Delta Integral Planning and Use Program, to be prepared by the ministries of agriculture and food industry, labor and education and instruction;

--the regulation on criteria to determine the optimum number of fish and reptile-eating birds to ensure a biological balance and to perpetuate the species in the

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\*The annex will be sent to the institutions concerned.

delta, and to eliminate the excess, to be prepared by the ministry of agriculture and food industry, the ministry of silviculture and the Academy of the Socialist Republic of Romania through the Commission for Preserving Natural Monuments and the Tulcea County People's Council.

Within the same time frame, a program will be established to exploit quartz sands and sands with heavy minerals in the delta and to extend research in this domain;

B. At phased intervals extending through the end of 1984, establish organizational documentation for equipping localities to develop economic activities in the delta and to promote a corresponding population increase.

Article 3.--During 1983, the National Council for Water Resources will promote the "North Midia Seashore Protection" investment development and will continue the protection efforts for the Sinoe seashore zone. Also, by the end of 1984, it will carry out the necessary studies and the hydrotechnical planning framework for the delta and for the protection for the nearby coastline.

The ministry of transportation and telecommunications and the National Council of Water Resources will study and, by the beginning of 1985, present proposals to limit the extension into the Black Sea of the protective dikes for the navigable canal of the Sulina channel.

Article 4.--During 1983, the ministry of chemical industry will develop operational documentation for the industrial process to manufacture ethyl alcohol from delta biomass and it will proceed with construction so that by 1984, the process may go into operation.

Within 60 days of this decree's publication, the ministry of agriculture and food industry will prepare a research program for herbicides needed to destroy troublesome vegetation--reeds, rushes, sedges and others--in the agricultural and fish-breeding operations in the delta.

Expert authorities in the ministry of agriculture and food industry will approve the products, and then the ministry of chemical industry will produce them.

Article 5.--The ministry of labor will take measures to assign excess workers annually on a priority basis from other areas in the country to the delta to meet the needs of the "Danube Delta" central.

Article 6.--The ministry of agriculture and food industry will provide the required fish stocks for reproduction from exchanges with other socialist countries, particularly for plant and plankton-eating species.

Article 7.--To ensure the implementation of the measures set forth in the Danube Delta Integral Planning and Use Program, the following will be submitted for approval:

A. Within 30 days of the decree's publication, proposals for the unitary organization of economic activities in the Danube Delta and for the establishment

of the construction-assembly "Danube Delta" Trust, to be prepared by the ministry of agriculture and food industry and the Tulcea County People's Council:

B. Within 60 days of this decree, a program of scientific research, technological development and introduction of technical advances for the complex exploitation of the natural resources in the Danube Delta, to be prepared by the National Council for Science and Technology.

Article 8.--The State Planning Committee, based on the ministries' proposals and as a function of the need, advisability and efficiency of the legally established investment objectives, will, in the annual and 5-year plans, provide for the objectives in the Danube Delta Integral Planning and Use Program. Such provision will be within the limits of investment sums approved for plan entitlements. Also it will provide for studies of the terrain and for technical-economic documentation, in phases, beginning in 1983, for the investment objectives planned for 1983 to 1990.

Nicolae Ceausescu, president of the Socialist Republic of Romania

Bucharest 28 March 1983

No. 92

12280

CSO: 2700/257

ENERGY SOURCES AND URBAN HEATING PROBLEM REVIEWED

Belgrade KOMUNA in Serbo-Croatian May 83 pp 29-37

[Article by Dr Nenad Djajic, professor and engineer, and Petar Pantelic, engineer: "Future Development of Area Heating Plants in Cities and Settlements in Conformity With the Conception of the Long-Range Development of the Fuel and Power Industry in the SFRY"]

[Excerpt] The need for optimum energy use, the available energy potential, ecological problems in our cities, and the broad conception of the long-range development of Yugoslavia's fuel and power industry require that particular attention be paid to the problems of central supply of thermal energy in cities. Especially since in most of Yugoslavia's cities development of that municipal infrastructure is lagging behind needs and is increasingly becoming a limiting factor on housing construction and development of the city as a whole. However, even now it can be said on the basis of experience to date and the anticipated development of the fuel and power industry that over the coming period up to the year 2000 and beyond any other solution for thermal energy supply than from central heating plants would be energy-inefficient and ecologically adverse in all those cases where the favorable technical-and-economic conditions obtain.

Because of the constant rise of prices and the shortage of quality fossil fuels in our country, higher utilization of domestic sources of energy is indispensable, above all of lignite in plants for combined production of electric power and thermal energy in the vicinity of large cities and settlements. This has great economic importance to our country, since it diminishes the necessary import of liquid fuels and thereby improves the balance of payments.

This article examines the characteristics of the development of the system of centralized thermal energy supply in Yugoslav cities to date and its importance and role in the future development of Yugoslavia's fuel and power industry and it proposes approximate solutions for the further development of that system in broad terms, starting with the available domestic sources of energy and taking into account the conceptions which have been adopted for the long-range development of Yugoslavia's fuel and power industry.

## The Basic Elements of Development of Yugoslavia's Fuel and Power Industry

It is well known that the fuel and power industry is one of the preconditions for development of overall physical production and consumption, and it is one of the most capital-intensive branches of the economy, has a manifold effect on the economic results of the conduct of economic activity and thereby represents one of the basic foundations for a country's overall economic development. That is why development of the fuel and power industry is not only one of the essential conditions, but is also a strong basic modifier of the economic structure and a propulsive factor for economic development as a whole. Accordingly, there has to be a very high correlation and mutual linkage between development of the fuel and power industry and that of the rest of the economy, as has been clearly manifested in the period just past. For example, in the period from 1960 to 1980 the correlation coefficient between the growth of the gross social product (computed in 1972 prices) and the rise in the level of energy consumption in Yugoslavia was in fact 0.99, and the coefficient of determination 0.98/1. The fuel and power industry has played a very significant role in the strong industrial development in our country, in its overall economic development, and also in raising the standard of living.

However, one of the basic and essential prerequisites for the prosperity and successful development of any country, including our own, is the possession of sufficient quantities of energy, and that in those forms of energy which best suit the energy and technological processes in utilities, industrial production and other uses. It is well known that there is little petroleum and gas in our country, that the growing needs for these high-grade forms of energy can be met to an ever smaller extent from domestic production. Mindful that in the coming period there will be increased consumption of petroleum products as well as of its technological raw materials in petrochemistry and also that there will be fewer and fewer opportunities to import the necessary quantities of petroleum (and natural gas) for reasons having to do with the balance of payments, solutions have to be sought in higher utilization of the domestic energy potential, above all lignite, and in energy conservation and optimum energy use. Our country, like other countries, is making exceptional efforts to meet most of its energy needs from its own energy sources. It has turned to that out of a need for security and reliability of its energy supply, to reduce the heavy burden on the balance of foreign exchange, to achieve continuity in delivery, and so on. Great attention is being paid everywhere to reducing the country's energy dependence as much as possible and to channel the imported energy only into those technological and energy purposes where it is irreplaceable or where its technical-and-economic suitability is markedly high compared to that of other energy raw materials.

Our country is relatively poor in energy raw materials, since the total per capita energy potential is about 9 gigatons of EU [equivalent coal or coal units (7,000 kilocalories per kilogram)]. That potential makes our country twice as poor as all the underdeveloped countries and far poorer than the advanced countries, and it is especially poor in the better-quality forms of primary energy. In the world at large, in fact, per capita energy reserves are sixfold greater than in Yugoslavia. The idea that Yugoslavia had abundant energy reserves was born in the time of extreme underdevelopment. Today on

the threshold of joining the moderately developed countries, higher consumption of fossil sources of energy is simply an illusion. Even this kind of modest available energy potential has been diminished in its economic importance because it consists mostly (almost two-thirds) of lignite reserves.

In the development of the fuel and power industry in the period up to now the pattern of energy production and consumption has been changing steadily. In the period up to 1960 the emphasis in energy production and consumption was on the use of coal and hydropotential--our own energy potential. This is the period of complete utilization of domestic energy potential, when there was a very slowly increasing substitution of domestic-quality fuels (petroleum and gas) for coal. However, in the period after 1965, and indeed even since 1973 and the "energy crisis," there has been a very rapid increase in the share of imported energy, liquid fuels above all, and reduced consumption (and thereby also production) of solid fuels. For that reason total production of primary energy has been lagging constantly and significantly behind the growth of energy consumption, especially in the period between 1976 and 1979, as is seen from Table 1.

Table 1

Indicator	Actual Average Growth Rates in Yugoslavia			
	1957-1979	1966-1979	1975-1981	1979-1981
Energy consumption	6.7	6.6	5.2	3.2
Energy production	4.5	3.2	3.7	4.7

A consequence of the lag of primary energy production behind the growth of energy consumption has been the growth of energy imports, and that at an average annual rate of 12.2 percent between 1957 and 1979 and 11.4 percent between 1976 and 1980. A somewhat more favorable situation came about after 1979, when a legal ban was put on use of public resources to build new heating plants, heat and power plants, and power plants fired by liquid fuels, and a measure adopted which prevented increased consumption of residual fuel oil and heating oil, thereby reducing imports of petroleum. This is evident from the pattern of gross energy consumption in the period from 1956 to 1980, which ranged within the relationships presented in Table 2.

Table 2

Year	Coal		Petroleum		Natural Gas		Hydropower		Total
	10 <sup>6</sup> t EU	%	10 <sup>6</sup> t EU	%	10 <sup>6</sup> t EU	%	10 <sup>6</sup> t EU	%	10 <sup>6</sup> t EU
1956	9.58	84.1	1.27	11.3	0.05	0.44	0.35	3.1	11.25
1965	15.27	71.8	4.44	20.9	0.39	1.80	1.17	5.6	21.28
1970	13.67	48.6	11.45	40.7	1.17	4.10	1.86	6.6	28.16
1973	15.09	44.6	15.13	44.7	1.60	4.70	2.01	5.9	33.83
1975	15.84	41.7	17.88	47.0	1.86	4.90	2.45	6.4	38.02
1980	20.23	40.1	22.67	44.9	4.06	8.10	3.50	6.9	50.46

The Most Important Task: Increasing the Share of Domestic Energy Sources in Total Energy Consumption in the SFRY

The basic problem in development of the Yugoslav fuel and power industry, as has already been emphasized, comes down to the problem of increasing the share of our own energy potential in total energy consumption. That is why the intention even in the Social Plan for Yugoslavia's Development in the Period From 1976 to 1980 was that the growth rate of consumption of heating oil, including residual fuel oil, was not to be greater than 5.6 percent, this forecast being based on improvement of the yield in the use of petroleum. However, in the first 3 years of that planning period (up to 1979) the growth rate of heating oil consumption was almost twice that high, and it dropped only in the last 2 years (Table 3). One reason for this was lateness in adopting the social compact of the republics and provinces on development of the petroleum industry, which was concluded not in 1976, but in mid-1979, so that larger capacity of thermal electric power plants fired with liquid (and gaseous) fuels was built than was envisaged by the agreement that was adopted on development of the electric power industry and the coal industry. That is why an absurd situation came about in which in spite of the declaration for ever greater coal consumption and reduction of the consumption of liquid fuels, exactly the opposite occurred, as is seen from Table 3.

Table 3

<u>Year</u>	<u>Gasoline</u>	<u>Diesel Fuel</u>	<u>Light Heating Oil</u>	<u>Residual Fuel Oil</u>	<u>Miscel- laneous</u>	<u>Total</u>
1970	1,242	1,616	861	2,931	1,002	7,652
1975	1,767	2,182	1,266	4,857	1,474	11,546
1978	2,345	2,674	1,747	6,663	2,152	15,581
1979	2,319	3,055	1,776	7,720	2,947	17,367
1980	2,120	2,990	1,620	6,432	2,871	16,033
1981	2,147	2,765	1,452	5,707	2,635	14,706
Index 80/75	3.7	6.5	5.1	5.7	14.3	6.8

The Social Plan of Yugoslavia's Development for the Period From 1981 to 1985 gives priority importance to the fuel and power industry, and it is emphasized in this connection that the development of energy production will rely to the greatest degree on the domestic potential, with imported energy being replaced by domestic energy in all sectors of consumption where there is the technical-and-economic justification. To that end it was stressed that there is a need for more thorough reassessment of our previous conception of energy development and use for the sake of reorientation toward domestic sources of energy, and in that connection measures embodying the system and other measures need to be furnished to carry out that policy of substitution, that is, conditions have to be created for coal, which is our largest source of energy, to replace petroleum to the greatest possible extent. The slowing down of petroleum imports, which is imposed by the balance of payments, causes a certain planned shortage of energy in the total balance of energy consumption, which imposes the need for all consumers to conserve as much as possible and use energy efficiently.



## Basic Goals of Yugoslavia's Long-Range Energy Policy

Taking it for granted that all elements of development of the country's fuel and power industry must be long-range in nature (since energy facilities and installations require very large investments and lengthy and reliable operation), the Conception of the Long-Range Development of Yugoslavia's Fuel and Power Industry up to the Year 2000 was adopted last year; it is based on the following ideas:

- i. increasing the volume and guaranteeing continuity in exploration for reserves of energy sources in order to increase their reserves and to make greater use of domestic energy sources;
- ii. achieve the fastest growth of production and consumption of coal and electric power from coal and from hydropower;
- iii. reduce the relative dependence on imported energy;
- iv. increase the share of investments in development of the fuel and power industry in total economic investments;
- v. continue to import that energy which cannot be furnished from domestic sources;
- vi. improve significantly optimum energy use in production and consumption and reduce energy consumption per unit output;
- vii. generate electric power in nuclear power plants, and
- viii. gradually bring new and renewable sources of energy into consumption in line with possibilities.

In accordance with these basic commitments of long-range energy policy, reliance is being placed on the following:

- i. faster development of our own technologies and achievement of independence in the production of fuel and power equipment as well as constant monitoring and efficient use of up-to-date technologies with a view toward more optimum exploration, production, processing and consumption of energy;
- ii. development of cooperation with the developing countries in explorations for and production and use of petroleum, gas, bituminous or better coal and nuclear raw materials;
- iii. protection of the environment against the consequences of exploitation of energy resources and the conversion and transport of energy.

Realization of these basic goals of Yugoslavia's long-range energy policy will facilitate stable and quality supply of energy to consumers, greater use of domestic energy potential and reduction of dependence on imported energy.

## Available Domestic Energy Sources for Heating Needs

Supplying the necessary energy and using it efficiently for heating needs is a very complicated problem confronted by all countries, including our own. Today liquid fuels are mostly being used to meet those needs, and the use of solid fuels is considerably less. This is a particular problem since today the major portion of energy raw materials is being used to meet heating needs. According to analyses done last year for the purposes of the symposium of the United Nations Economic Commission for Europe (ECE) entitled "Comparative Advantages of Energy Sources in Meeting Final Needs for Heat," on the basis of data supplied by 24 countries of the ECE region (all the countries of Europe and North America), it follows that more than 60 percent of total energy consumption is used to meet heating needs, about half of which are low-temperature needs (below 100° C, mostly for heating and preparation of hot water for consumption). Similar relationships were derived for our own country, as shown in Table 4.

Table 4

	In percentage		
<u>Types of Energy in the SFRY</u>	<u>1978</u>	<u>1990</u>	<u>2000</u>
Thermal energy			
Low-temperature (under 100° C)	31.6	31.8	32.0
Medium-temperature (from 100° to 300° C)	8.9	9.2	9.5
High-temperature (over 300° C)	<u>25.9</u>	<u>24.0</u>	<u>22.0</u>
Total	65.7	65.0	63.0
Energy for transportation	15.8	16.0	16.5
Electric power (except for heating needs)	8.5	9.0	10.0
Other	10.0	10.0	10.0

Quality forms of energy (petroleum products, gas, electric power and brown coal) are mainly used today to meet low-temperature needs (heating and preparation of hot water for consumption). It is a great advantage if individual consumers can in principle use all types of fuels and energy for these needs, that is, if they themselves can choose that form of energy which best suits them. However, sources of centralized supply of thermal energy, which have abandoned solid fuel on the grounds of cheap petroleum and environmental protection, will in the coming period be compelled to commit themselves in the long run to domestic energy potential, above all to coal.

It has already been emphasized that our coal is our largest energy potential, but in its primary form it is used very little to meet low-temperature needs. The main reason is the unfavorable proportional distribution of our coals, since bituminous or better coal represents only about 0.5 percent, brown coal about 11 percent, and low-grade lignite in fact more than 88 percent of our reserves. Up to now lignite use has been mainly related to production of electric power at the site where it is mined. That is why for the future of

our fuel and power industry it is very important that we develop further techniques and technology for thorough use of lignite to produce high-grade solid fuels (briquettes, semicoke, dried lignite) and gaseous fuels (illuminating gas and substitute natural gas). Achieving this requires more intensive development of lignite production, for which very good conditions obtain (relatively large reserves, a marked concentration of reserves in a small number of localities, favorable mining-geology and other conditions, economically acceptable stripping ratios, satisfactory location of the basins relative to consumers and the infrastructure that has been built for carrying the energy, and so on).

As it is viewed at present, and assuming losses of 10 percent, it is possible under economically acceptable conditions to strip-mine nearly 70 percent of total reserves, that is, converted to quantities of equivalent coal, slightly more than 80 percent of the energy they contain, about 86 percent of which would be lignite. The concentration of reserves at a small number of localities and the reserves available make it possible to build modern open pits and facilities at the level in the rest of the world, which will make it possible in the near future to increase coal production at rates higher than 5 percent, as was foreseen in the Conception of the Long-Range Development of Yugoslavia's Fuel and Power Industry up to the Year 2000. According to many studies and analyses, it is a realistic estimate to expect in the year 2000 an output of about 240 million tons of coal and in the year 2020 to achieve 270 million tons, in which the share of lignite would be over 90 percent.

#### Cities and Their Heating Plants Must Turn Toward Nearby Coal Producers and Invest in Their Facilities

Although predictions in the development of coal production have been based mostly on strip mining, since it facilitates large-scale and the most highly mechanized production, underground exploitation will also develop considerably faster and more intensively in the coming period. Since quality fuels (bituminous or better coal, brown coal and the better grades of lignite) can be produced only in that way, the role of underground mining in meeting low-temperature needs will be ever more important. Although coal production from underground exploitation is growing steadily, it will in relative terms decline in the total coal production (in tonnage), and when the maximum possible production of coal is achieved with the presently available capability (about 50 million tons), it will have a share of only about 15 percent, although in heating value its share will be considerably higher, even as much as 30 percent.

This will have great importance in meeting heating needs, since the deposits of quality coal are conveniently located in our country; there are more than 70 of them, so that they can be conveniently used to supply nearby cities. This would also guarantee greater reliability in supply of the necessary energy to the cities. Starting from the fact that "the energy you do not have is the most expensive," that imported energy is becoming more and more expensive and less reliable than the energy that can be obtained within the country, cities and their utilities must orient themselves toward nearby coal producers and invest in their facilities so that in the future they will have inexpensive energy they can rely on in adequate quantities.

To that end there is a need for the electric power industry to renounce its demand for the better-quality coals and place those available quantities at the disposition of utilities in the cities. Without production in underground mines it will not be possible to achieve the projected substitution of liquid fuels in sources of centralized supply of thermal energy [that is, central heating plants]. That is why particular attention should be paid to the problem of underground mining and reconstruction of the mine by introducing up-to-date mechanization and by using highly productive equipment for low-waste coal mining.

The need for environmental protection is often given as the main objection to use of solid fuels in cities. However, at the present time, because of the ever higher price of energy raw materials, it is possible to move sources of centralized supply as much 10 km or even more from the immediate urban zone, which reduces pollution in the city. In this respect it will be especially important to build thermal electric power and heating plants for combined production of thermal energy and electric power. The planned development of electric power facilities up to the year 2000 envisages construction of thermal electric power plants fired with lignite with capacity up to 15,000 MW, not counting replacement of a sizable portion of existing capacity. Conditions are created thereby for construction of heat-and-power plants right where the raw materials are located, with the possibility of economical transport of heat to consumers.

As for the possibility of building combined plants, the localities of the large coal basins are especially interesting (Kolubara, Kostolac, Kosovo, Velenje, Kreka, Kakanj, and Pljevlja), since large thermal electric power plants are already being built at these localities. Taking into account mines with underground exploration, there are also a certain number of sizable cities within the radius of economical transport of the better-quality coals and beneficiated lignites, which might on the basis of those fuels provide a long-term solution for supply of the necessary fuels, and that by means of large-capacity boiler plants located outside the city.

Development of new technologies for combustion, such as combustion in a fluidized bed, has great importance to greater use of solid fuels. The technical-and-economic advantages, such as smaller installation size, effective maintenance of temperature within optimum limits, lower corrosion, higher efficiency and the use of coals with higher sulfur content have contributed to intensive development of large-capacity installations with fluidized-bed fire chambers.

However, if increased coal consumption is to be made possible, our machine-building has to develop its own designs of boilers (and furnaces) for domestic solid fuels, which was specifically discussed at this year's conference of the Yugoslav Commission of the World Energy Conference, which was entitled "Sources of Energy and Engineering and Technological Development of Equipment for the Fuel and Power Industry."

Solid fuel consumption in boiler plants will be considerably greater in intermediate form when installations are built for production of synthetic gas from coal, since then it will be possible to use it in present installations for liquid fuels without major reconstruction.

The problem of the reconstruction of existing boilers for liquid fuel is a very complicated one. Before the transition to coal use a feasibility study needs to be made to determine the technical and economic justifiability of that reconstruction. New installations designed for use of liquid fuel must always be based on an examination of whether the transition to coal is economically and technically possible and under what conditions? That is why in spite of the commitment to greater use of domestic energy potential, in the coming period there will still be sizable consumption of liquid and gaseous fuels to meet the needs of low-temperature processes, which should always be borne in mind when long-term energy balances of a city, region or republic are being defined.

#### Characteristics of Existing and Future Systems for Combustion in Yugoslavia's Cities

Maintaining temperature conditions in residential space and in public, cultural and industrial buildings (heating and air conditioning) and preparation of hot water for consumption for bathing, washing and the like, are indispensable needs of life. Changes in the manner of construction because of the very rapid development of cities and also the ever greater use of central heating and rise in the standard of living of city dwellers have brought about development of technical knowledge in this field of the energy industry.

In the world, and indeed in Yugoslavia, because of the considerable increase in consumption of thermal energy for low-temperature processes (as we have said, about a third of total energy consumption), the tendency today is toward the most optimum use of primary energy to meet precisely those needs. In this respect it is especially important to make ever greater use of centralized supply of thermal energy.

There are more than 110 cities in Yugoslavia where there is some form of centralized supply of thermal energy. Of that number centralized thermal energy supply has been developed on a broad scale or is in the phase of development in the following cities: Belgrade, Zagreb, Ljubljana, Travnik, Skoplje, Sarajevo, Novi Sad, Banja Luka, Velenje, Kragujevac, Nis, Rijeka, Subotica, Zrenjanin, Osijek, Celje, Pristina, Zenica, Tuzla, Kranj, Trbovlje, Titovo Uzice, Maribor, Karlovac, Sisak, Niksic, Valjevo, Mladenovac, Pozarevac, Paracin, Svetozarevo, Majdanpek and Bor.

In Belgrade, Zagreb and Ljubljana centralized thermal energy supply comes partly from systems with combined production of thermal energy and electric power, which are referred to as heating systems.

A heating system of this kind is under construction in Novi Sad and Osijek, and in Skoplje, Banja Luka and Subotica their construction is planned. In other cities, as far as we know now, thermal energy production would be in block and district boiler plants.

Table 5 gives a survey of certain indicators of centralized thermal energy supply of cities in Yugoslavia, with a cross section for 1980 and the year 2000.

Table 5

City	Total Thermal Energy Consumption, MW		Thermal Energy Consumption To Heat Public, Office, Industrial and Other Buildings, MW		Thermal Energy Consumption for Residential Heating, MW	
	1980	2000	1980	2000	1980	2000
Belgrade	2,210	6,140	1,330	2,900	880	3,240
Zagreb	810	2,540	250	1,000	350	1,340
Ljubljana	620	1,820	340	960	240	780
Skoplje	347	1,327	35	130	295	1,180
Novi Sad	215	870	100	300	115	170
Pristina	115	320	75	215	40	105
Subotica	132	367	84	261	24	74
Velenje	229	410	17	32	152	288
Rijeka	360	492	250	320	108	172
Maribor	25	434	5	84	20	350
Karlovac	41	241	23	135	18	106
Zrenjanin	276	365	26	107	72	90
Osijek	84	225	60	160	24	65
Trbovlje	20	115	12	70	8	45
Banja Luka	184	829	80	459	104	325

City	Thermal Energy Consumption for Processing Purposes, MW		Central Hot Water Supply	Type of Fuel	Remarks
	1980	2000			
Belgrade	--	--	Partly	Gas Furnace oil	A coal-fired heat-and-power plant is planned
Zagreb	200	300	Yes	Gas Furnace oil	
Ljubljana	40	80	Yes	Gas Coal, gas	
Skoplje	17	17	Yes	Furnace oil	
Novi Sad	--	200	Yes	Gas Furnace oil	A 135-MWe heat-and-power plant under construction
Pristina	--	--	Yes	Gas Furnace oil	
Subotica	12	32	No	Furnace oil coal	
Velenje	63	90	Yes	Coal	
Rijeka	--	--	Yes	Furnace oil	
Maribor	--	35	Yes	Gas Furnace oil	

Table 5 (continued)

City	Thermal Energy Consumption for Processing Purposes, MW		Central Hot Water Supply	Type of Fuel	Remarks
	1980	2000			
Karlovac	--	--	No	Furnace oil	
Zrenjanin	168	168	No	Gas	
				Furnace oil	
Osijek	32	71	No	Gas	A 45-MWe heat-and-power plant under construction
				Furnace oil	
Trbovlje	--	--	Yes	Furnace oil	
Banja Luka	--	400	Yes	Coal	A 4x135-MWe heat-and-power plant planned
				Furnace oil	

However, centralized thermal energy supply exists after all in a quite small number of cities, and estimates of future development of the system for heating, production and consumption of thermal energy to meet heating needs and to prepare hot water for consumption are based on certain premises. According to the statistics, the total number of housing units in Yugoslavia in 1981 was 6.15 million. About 3.3 million of those are rural housing units, 2.85 million are urban units, 615,000 of them with central heating. The average number of inhabitants per housing unit was 3.6. The average standard amount of residential floor space per inhabitant was about 15 square meters in urban settlements. Accordingly, the average size of the housing unit was about 55 square meters. In the future, up to the year 2000 and beyond, we can assume a rise in the standard per capita floor space of housing, in which case the average housing unit will be about 65 square meters. The present standard consumption of thermal energy for heating is about 140 watts per square meter, that is, the average housing unit requires maximal thermal energy amounting to about 7,000 watts per housing unit, except that a reduction of about 30 percent is anticipated in specific consumption of thermal energy.

Public, cultural, office and industrial buildings in cities comprise about 30 percent of the floor space of housing units in cities, and in most cases they have central heating, but their specific consumption of thermal energy for heating is about 20 percent higher than that of residential space.

Hot water consumption is highest in urban housing units, and that in all newly built units, while for other units built earlier it can be estimated at about 50 percent of urban housing units. Preparation of hot water for consumption is mainly done in electric water heaters, except in certain cities, where there is centralized supply from the system for centralized thermal energy supply. In cases when electric hot-water heaters are used, the average installed capacity per housing unit for these purposes is about 2,000 watts per housing unit.

Thermal energy consumption for heating depends on the method used for heating the housing unit: either local heating equipment or central heating.

It can be assumed that in cities which do not have central heating 30 percent of residential heating would come from oil furnaces, 30 percent from coal stoves, 30 percent from electric power, and 10 percent from liquefied gas. We can also assume that in those housing units they heat on the average about 50 percent of the floor space of the unit (kitchen and one room). In rural housing units they heat on the average about 30 percent of the area of the average unit, and that mainly with stoves in the rooms themselves, kitchen ranges using wood and negligible use of coal.

#### Conservation of Primary Energy by Using Centralized Preparation of Hot Water for Consumption

Depending on the method used for heating and preparation of hot water for consumption, considerable savings of primary energy can be achieved in Yugoslavia's cities in the production of low-potential thermal energy.

If we start with the least favorable solution, the use of electric heating, total annual consumption of primary energy for heating needs in cities in the year 2000 would amount to  $29,600 \times 10^3$  tons per year of standard fuel. If individual boilers and small block boilers are used, primary energy consumption for the same conditions and needs would amount to  $14,800 \times 10^3$  tons per year of standard fuel. If large district boiler plants are used, primary energy consumption would amount to  $11,100 \times 10^3$  tons per year of standard fuel. Using the combined process of production, consumption of primary energy would amount to  $3,340 \times 10^3$  tons per year of standard fuel.

The primary energy conservation achieved by using centralized preparation of hot water for consumption as compared to preparation in electric hot-water heaters would for the conditions assumed in the year 2000 amount to  $3,000 \times 10^3$  tons of standard fuel. If the use of centralized preparation of hot water for consumption were to begin in most cases where this is possible beginning in 1985 and beyond, and if the existing electric hot-water heaters are replaced in all areas where there is centralized thermal energy supply, the total conservation of primary energy in the period from 1985 to the year 2000 would amount to  $28,000 \times 10^3$  tons of standard fuel. This order of magnitude indicates the necessity of adopting the relevant legislation in order to give priority to the use of centralized preparation of hot water for consumption.

Mention is also made of other benefits which are not important from the energy standpoint, but do represent a very broad social interest, and they are also attained by using centralized thermal energy supply.

Construction of large-capacity sources of thermal energy with equipment for scrubbing combustion gases as well as construction of high smokestacks affords the lowest degree of air pollution in a comparison with stoves and heaters, small individual boilers and block boiler plants.



Creation of utilities for thermal energy supply of cities guides the coordination and professional and responsible supply of thermal energy to meet the needs of the city by securing fuel, spare parts and other things, whereby reliability is achieved in the supply of thermal energy to consumers in the city.

#### Advantages of Combined Production of Thermal Energy and Electric Power

Advanced systems of centralized thermal energy supply through urban heating networks which have been built allow for the use of several types of heat sources, that is, depending on the condition of energy reserves a change in the basic type of fuel, coal, residual fuel oil, gas, nuclear fuel, etc., so that in practical terms their service life can be set equal to the possible duration of supply of energy to cities and settlements.

Combined production of thermal energy and electric power has particular importance in efficient use of primary energy. If we look at the period from 1985 to the year 2000 and assume use of the heat-and-power process with the same assumptions and an estimate of the linear increase in the heat load in cities and corresponding construction of heat-and-power units, total primary energy conservation achieved by using the heat-and-power process for 40 percent of the heat load of the cities in 1985 would over the period from 1985 to the year 2000 amount to about  $75,000 \times 10^3$  tons of standard fuel. This means that with no change in the combined process of production of thermal and electric power over the period from 1985 to the year 2000 according to the assumed dynamic pattern, thermal energy in the amount of  $75,000 \times 10^3$  tons of standard fuel would be irrecoverably and uselessly emitted into the atmosphere and discharged into streams. That same amount of primary energy would in that case have to be made up from other sources on the basis of domestic or imported primary energy. In the period after the year 2000 the size of the saving on primary energy grows still more considerably and rapidly.

That is why more and more consideration is being given to the use of coal for combined production of thermal energy and electric power in the vicinity of major urban and industrial centers, especially where new electric power facilities will in any case be built. This gives great importance to the measure proposed in the Program of Long-Range Measures for Optimalization, Substitution and Conservation of Energy, which provides that "the aim should be faster construction of heat-and-power plants fired with coal in the vicinity of major centers of consumption, which would at one and the same time meet needs for thermal energy and electric power." One particular convenience in this regard is the fact that in our country, aside from the 6 large coal basins (Kosovo, Metohija, Kolubara, Kostolac, Kreka and Velenje) there are more than 70 smaller coalfields of better quality, more or less uniformly distributed, many of which can be conveniently used precisely to supply nearby cities.

With respect to the possibility of building these combined sources, of particular interest are the cities Belgrade, Pristina, Tuzla, Velenje, Pozarevac, Zagreb, Celje, Ljubljana, Bitolj, Kragujevac and others. Belgrade, which is the largest area of consumption, has all the preconditions for use of Kolubara

lignite in heating plants outside the city up to 2,000 MW. Pristina (including Titova Mitrovica and nearby industrial consumers) is located in the immediate vicinity of Kosovo's abundant lignite deposits. In the vicinity of the Kostolac REIK [Mining, Energy and Industrial Combine] are the nearby cities of Pozarevac and Smederevo, with their utility and industrial consumers. Tuzla might also be supplied from future heating plants built as part of the new phases of the Tuzla Thermal Electric Power Plant. With respect to future construction of nuclear heating plants Zagreb, Novi Sad, Smederevo and others are interesting cities, while certain brown coal mines might also be a source of fuel for heating plants in the vicinity of Kragujevac, Svetozarevo, Zenica, Banja Luka, Sarajevo, etc.

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ENVIRONMENTAL PROTECTION COUNCIL HEAD REVIEWS SITUATION

Belgrade PRIVREDNI PREGLED in Serbo Croatian 23-25 Jul 83 pp 7, 12

[Interview with Anđelko Kalpic, president of the Presidency of the Yugoslav Council on Environmental Protection and Improvement by Dragoslav Zivojnov: "The Threat of The Ecological Bomb"; date and place not given]

[Text] For the decade of its existence, the Council has achieved noticeable results, but its responsibilities, pressured by the rapid development of technology, have also increased significantly. The right of every person to pure water, food, air, and land, however, is inalienable. In order to provide this, a new behavioral relationships, and a reliance upon personal forces are necessary.

Looking the ecological bomb in the face- a bomb which equally and impartially threatens all of humanity, we see the possibility for survival to be in the protection and improvement of the environment. The fact that we hear news from certain areas that the environment in which we live is being threatened as far as our farthest borders indicates to us that the meatest responsibility in these cases is in the wrong hands.

The most recent example of a high level of water pollution in Lim--the use of Lim was defended by an inspection in Serbia--is only a part of the pollution problem which includes serious air pollution (Bor, Zenica, Pancevo, Beocin, Titova Mitrovica) pollution of thecoastal region (the cement plant in Kastelanski Bay, the cokery in Bakar), and even the more and more frequently heard appraisals of foreign tourists that Belgrade is a "pretty, but dirty city."

Our editor, Dragoslav Zivojnov, talked with Anđelko Kalpic, president of the Presidency of the Yugoslav Council on Environmental Protection and Improvement , about the activities and problems of the Council.

[Question] How much has the sudden development of technology and industry in our country threatened the living and working environment, and does th newest report of the Federal Social Council for Questions of Social Order, titled "Conclusion of the Long-term Progress For Economic Stabilization," provide more specific measures for overcoming this situation?

[Answer] Basic changes in the structure of the economy and in technological development as a whole are necessary, and, above all, getting away from foreign influences and imported expertise. The most rational way of managing the living and working environment demands freedom from heavy industries which pollute, switching over to clean, alternative forms of energy which do not threaten life with harmful components. It won't be easy to achieve this--after a large number of expensive failures--because for the most part we have paid for somebody else's knowledge and have ignored our own scientific research work which is a better long-term investment. And today one can hear some people say that we do not have the time or the money to occupy ourselves now with protecting the environment, because we are burdened with more important problems, that we will worry about it when we have attained the status of a developed country. If we were to accept this line of thought, we would quickly have nothing more to think about. This means that, in essence, we must change the style and the rules of behavior, and relationships toward work and toward the management of the riches of nature. This demands new behavior in the street, on the collective, etc. A five-fold increase in communal services would not help Belgrade if the inhabitants of this large city leave all the worry about environmental cleanliness only to professionals. What is necessary, in other words, is a radical change in which protection of the human environment will become management of the human environment.

I think that after scientific and specialized expertise are used along with the respect of the important experiences and opinions of the public, we will not again have another Obrovac which threatens the ecology, and the budget. In this case, we will have more success with nuclear power plants in the future. Of course, we must take into consideration the petrochemical installations, the cement plants, and the other industrial projects of this kind, because a number of the present locations of the plants are more harmful than helpful to development, especially along the Adriatic coast. If we continue to degrade our natural resources by industrial pollution and by manual cultivation [sic]--as the earth is worked by hand to a large extent--the consequences of our actions will be less and less favorable for future generations.

In the last two years, the Yugoslav Council for Environmental Protection and Improvement has contributed a great deal towards the creation of a program for better energy usage in order to protect and improve living and working conditions, to preserve air, water, and land; it has carried out a number of public campaigns, and it has attempted to get as many people as possible to participate in them, from local communities to the highest governmental organs. The campaign, "88 Trees For Comrade Tito," in which memorial parks are being constructed, is one of the successful ones.

The document "The Conclusion of the Long-term Program For Economic Stabilization," does not ignore this problem area and the significance of the problem is indicated in many places, but not given special treatment. Of course, in order to turn more attention to this topic, we

must go our own way in a more effective manner, and free ourselves from foreign technology and dependence. This is the case because when we understand in greater detail the motives of foreign capital, it becomes clear that it is more suitable for them to construct industrial projects which may pollute the environment on our shores and in our regions which are far from their own. Becoming free of this type of technology is not easy, of course, for developing countries. The long-term aim of protecting environmental resources requires that this be a basic motive and consideration.

There are also positive examples such as Osijek, Sarajevo, Porec, and even "Podravka" in Koprivnica, where they have solved the problem of waste water with complete processing and by protection of the standard of living as a whole. Of course, there are many tourists spots here, but this is not completely satisfactory. Let us say that we have still not carried out measures for de-sulphurization in this country, and that we are among the leaders in Europe in the pollution by air by sulphur-dioxide concentrations. The de-sulphurization of coal is necessary, considering that "black gold" is the fuel of our future. Moreover, damage caused by sulphur components when burned with coal is quite severe.

[Question] From "Dina" to Krk, across Sibenik, Bakar, Kastelanski Bay, things have been permitted which were not included in environmental protection measures. How can this be eliminated?

[Answer] It is a rare area or region that has as solidly a developed program of protection as does the Adriatic area. [Kalpic has been connected with the sea his entire professional life] The first and second conferences concerning the protection of the Adriatic played a significant role in this, but negotiations must be carried out more consistently when certain locations are in question. Along the sea it is possible to develop individual areas which are not part of the domain of heavy industry, and which, up to now, have obviously not been adequately respected. What awaits us from "Dina" we will have to see, but what has already been demonstrated in a negative fashion has been enough, and too expensive, of a warning. The programs of our Council for this year and for next are aimed precisely at a more effective emphasis on the significance of this problem area. The fact that environmental protection is on the agenda of the Federal Conference of SAWPY for the first time indicates the importance of the whole project. One must not forget that tourists come to us from all over the world just because of the sea. Along our coast, the places where the sea is still pure or salvageable are rarer than they should be. We cannot put a price on this value.

[Question] How can we get rid of the major pollutants?

[Answer] By using and constructing as few naphtha installations as is possible, by decreasing traffic in our large cities (one automobile pollutes four times as much as one man), by protecting agricultural

land (every year we lose over 15,000 hectares of productive land for irrational construction), and by imposing special responsibilities on the use of nuclear energy. There are few green expanses of land in populated areas, and approximately 3 million hectares of forest land are still bare mountain terrain and underbrush. And let's not even talk about the lack of uniformity and the uncontrolled distribution in garbage disposal, and the location of dumps. True, this area is well covered with laws and regulations, but if each of us would respect elementary forms of behavior, the conditions of the living environment would be improved many times over, and the amount of money spent for this purpose would be significantly decreased. It is indeed well known that over the last two years the country's Economic Development Plan was not dealt with the problem of protection and improvement of the quality of the environment even to the extent of earlier years. Nor have measures, norms, and standards for the management of land and urbanism been worked out with respect to proper locations for factories, schools, hospitals, traffic arteries, institutions for children, apartment buildings, and similar projects. Thus we have the phenomenon of the growth of large polluted cities and the abandonment of smaller villages and agricultural land resulting in harmful consequences for the country's economy, for life, and for defense. In our cities there are at most 10 square meters of open, green space for every inhabitant, but experience around the world shows these areas should be at least 40 square meters per inhabitant.

[Question] How much will more effective protection cost?

[Answer] It costs more for repairing the damage than it does for taking the preventive measures. For the processing of all waste water, industries in our cities need pay only 300 dinars a month for each person employed, or approximately 11 to 13 para per cubic meter of waste water. This would be quickly paid off by a reduction in environmental damage and by the preservation of fresh water. In the end, the cost is the equivalent of a pack of cigarettes a day. In reality, the greatest savings takes place through investment in useful production with a minimum of dirty industrial waste. We must be especially on guard against the import of this sort of technology. We know that in Brazil the biological balance was upset because the forest was cut down in order to plant sugar cane, from which alcohol is produced to replace naphtha.

Of course, we must eliminate much of the squabbling among the various republics, and the question of the Sava, the Una, and the Malostonski Bay, and other areas should not be allowed to drag out in spite of signed commitments and various regulations. It is apparent from all of this that we are not using the advantages of our self-managed, socialist system adequately, in which essential oppositions between ecology and economy do not exist. The advantage, however, lies in the fact that our system makes it possible for those interests which are for the benefit of society as a whole and which are built on lasting bases to prevail. This is necessary for us in order to implement long-term programs for economic stabilization.

## SURVEY OF ELECTRIC POWER STATUS; OUTLOOK TO 2020

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 25-27 Jun 83 pp 8-9

## [Text] Why We Imported Current Last Year

As against the 1 billion kilowatt hours annually produced immediately after the war, the Yugoslav electric power system produced around 64 billion kilowatt hours in 1982. This was 4.1 percent above the production achieved during the previous year. Consumption was slightly higher than 63 billion kilowatt hours, the difference being met with imports of electric energy. The impossibility of fully meeting consumption is a consequence of delay in construction of new generating capacities, markedly poor hydrologic conditions, and the increasingly prominent problems in securing crude oil for the few but important power plants operating on crude oil. A total of around 16,000 megawatts of installed capacity was available at the end of 1982, 37.5 percent in hydroelectric power plants and the remainder in thermoelectric plants operating chiefly on lignite. Of the total generation by electric industry power plants in 1982, hydroelectric plants accounted for 39.6 percent, coal thermoelectric plants 49.2 percent, liquid fuel and gas thermoelectric plants 7.2 percent, and the Krsko Nuclear Power Plant 4.0 percent.

A number of studies of further development of the electric energy system normally operated by all the electric industries of the republics and provinces examine a large number of alternate choices of electric power plants, both over the short term up to 1985 and over a long term, mostly to the year 2000. These options have been coordinated at the level of Yugoslavia as a whole in order to find the most economical solutions, and they have undergone certain modifications and additions as required, especially for the short term. Constant modification and addition to the plans are necessary for the sake of coordination with actual fluctuations in consumption and precise determination of the technical and economic parameters.

In keeping with the plans made for construction of the necessary sources, power plants, plans have also been drawn up for further development of a unified and mutually linked transmission grid, which, as a result of phase I construction of the highest voltage grid (400 kilovolts), has made a considerable contribution to insuring higher quality and greater dependability in meeting all consumption needs throughout Yugoslavia. This grid has permitted more intensive linking with the grids of neighboring countries, and thus broad exchange of electric energy with these countries.

The basis of the short term and long term plans of development of the electric energy system is represented by the estimated natural increase in electric energy in accordance with the anticipated future social and economic development of the country. A recently published document (April 1983) of the Commission of Federal and Public Councils on Problems of Economic Stabilization, entitled "A Strategy for Long Term Development of Yugoslav Power Engineering," gives among other things estimates of the long term development of consumption and production of electric energy over the period up to the year 2020. These estimates are simultaneously useful guidelines for elaboration in greater detail of the plans and programs for long term development of power engineering in the electric industry.

#### Domestic Sources and Domestic Industry, the Basis of Development

Since electric energy is one of the essential factors in the economic and social development of the country, and in view of the remaining available natural energy reserves, coal and water, the fundamental strategy of development of power engineering in the country must, in the future, be based on the following assumptions:

- continued intensive utilization of the remaining available hydroelectric power potential, along with construction of conventional thermoelectric power plants operating on lignite,

- continuation of working of surface lignite mines in the lignite rich coal basins and opening of new lignite deposits the working of which is economically justified,

- intensive preparations and commencement of extensive construction of nuclear electric power plants by the end of this century, by which time a level of supply of more than 80 percent with the country's own natural sources will have been reached, together with selection of a unified technology for nuclear electric power plants and systematic prospecting for uranium,

- intensification of development of the domestic energy equipment industry for the sake of the most extensive possible (compulsory) installation of domestically manufactured equipment in electric power production facilities,

- essential future development of the transmission grid and accompanying transmission structures, for the sake of greater flexibility and ease in receipt of electric energy from power plants located near coal mines and hydroelectric power plants located in the most favorable areas of drainage basins,

- further linking of the transmission grid to the grids of neighboring countries for the purpose of rational exchange of surplus electric energy or importation when necessary, and,

- rational production and distribution of electric energy through modernization of the management of electric power production facilities and systems.



The total balance sheet reserves of coal in Yugoslavia are estimated to be around 14.6 billion tons, of which about 77 percent is accounted for by lignite, the basic fuel for current and future conventional thermoelectric power plants. On the other hand, the total technically usable hydroelectric energy potential of Yugoslavia amounts to around 57 billion kilowatt hours annually, of which nearly 45 percent has been utilized up to the present.

The analyses made in the document on the strategy of long term development of power engineering are based on three assumptions of average growth of the social product:

- a pessimistic one of 3 to 3.5 percent per year,
- a moderate one of 3.5 to 4 percent per year, and
- a desirable one of 3.5 to 5 percent per year, the percentage of growth rising up to the period 1990-1995 and then gradually declining again. In view of the fact that the past correlation between electric energy consumption and the social product will continue to be more or less the same, the estimated consumption or necessary (annual) production of electric energy over the long term will be as shown in the following table:

Year 1982	- 65 billion kilowatt hours (actual)
Year 1985	- about 75 billion kilowatt hours
Year 1990	- about 98 billion kilowatt hours
Year 2000	- about 176 billion kilowatt hours
Year 2010	- about 282 billion kilowatt hours
Year 2020	- about 425 billion kilowatt hours

To give a better idea of the amount of electric energy needed annually, we will point out that the annual production by the Djerdap Hydroelectric Power Plant is around 5.5 billion kilowatt hours and the production by the largest thermoelectric plant in the system, the Obrenovac Thermoelectric Power Plant is around 9 billion kilowatt hours, in other words, over the next 3 years alone, what with the anticipated increase of 5 percent per year or around 3 billion per year, it will be necessary for a plant with the output of Djerdap to commence operation after each 1.5 year interval.

#### Hydroelectric Potential in the Foreground

The electric energy budgets, which are based on estimated electric energy needs and are drawn up for the purpose of determining the more favorable power plants to be constructed and to meet consumption needs, indicate that it is necessary to move in the direction of speeding up utilization of the remaining hydroelectric power potential needed for construction of conventional thermoelectric power plants operating on lignite and the essential elementary and later extensive construction of nuclear electric power plants. Intensive construction of hydroelectric power plants is (and has been) imperative, since the energy of rivers is irreversibly lost and hydroelectric power plants can be outfitted entirely with equipment produced in Yugoslavia,

With this fundamental approach in drawing up of energy budgets for the future period, the estimated electric energy production required would have approximately the structure shown in the following table (expressed in percent):

Year	Thermoelectric Power Plant	Hydroelectric Power Plant	Nuclear Power Plant	Other
1985	45.5	41.4	5.1	8
1990	50.7	39.8	3.9	5.6
2000	52.4	31.2	12.4	4.0
2020	29.9	13.3	53.1	3.7

It follows from the estimated electric energy requirements and the percentages of participation in production that about two-thirds of the usable hydroelectric power potential would have to be developed by 1990 and virtually 100 percent by the year 2000. During the period following the year 2000 it would be necessary to continue intensive construction of nuclear power plants, the share of which in production would amount to more than 50 percent around 2020.

Construction of the necessary thermoelectric power plants operating on lignite, a process to be accelerated up to the year 2010, when coal reserves will begin to be exhausted, will also require great increase in the production of lignite, practically all of which is burned in electric power plants erected at mines. On the basis of construction of thermoelectric power plants, it is estimated that the following annual production of lignite will be required:

Year	Millions of Tons
1982	around 43 (actual)
1985	around 54 (actual)
1990	around 81 (actual)
2000	around 155 (actual)
2020	around 280 (actual)

In short, lignite production will have to be almost doubled by 1990 and quadrupled by the end of the century.

#### Nuclear Power Plants: Contracts Needed To Begin Construction

Commencement of the construction of nuclear power plants following 1990 (two or three, each producing around 5.5 to 6 billion kilowatt hours) requires acceleration of preparations, agreement on use of a common type of reactor, and accelerated prospecting for uranium deposits. As has been pointed out, our industry, above all mechanical engineering, must promptly make preparations for assimilation of complex nuclear technology. The balance sheet reserves of uranium amount to only around 2,700 tons of uranium concentrate and are found in a single deposit, Zirovski Vrh, and represent only 4 percent of the total nonbalance sheet and potential reserves. This demonstrates that very little prospecting for uranium has been carried out in Yugoslavia. If the prediction concerning potential future uranium production at the

Zirovski Vrh Mine (the latest figures indicate around 330,000 tons of uranium concentrate) and the Skofja Loka sector prove accurate, it may be said that needs will be filled for 2 to 3 nuclear electric power plants in addition to the Krsko plant.

Despite the considerably higher specific cost of small hydroelectric plants, the so-called micro plants, it is useful to study the justification for building them in individual cases, something which first requires preparation of a register of small falls for the purpose of defining the basic parameters of standardized equipment. As regards production of electric energy making use of new energy forms, particularly renewable energy--solar energy, wind energy, etc--for the time being it is not being considered, either from the economic viewpoint or from the viewpoint of technical potential.

#### Investments Required for Electric Power Facilities

Development of the electric power system requires extremely high investments, in view of the growing needs of electric energy production and the constant rise in the cost of energy equipment on the domestic and foreign markets. Hence, sensibility in construction is extremely important, as are also efficient operation and optimization of work in the system after it has been established. Previous development confirms justification of the share of power engineering of 30 to 35 percent in total investments in industry, or 12 to 15 percent of the total investments in the economy, and of the share of the electric industry itself of 8 to 10 percent in the total investments in the economy, without disruption of the general investment structure in Yugoslavia.

It must be pointed out, however, that these percentages will be higher in future development of power engineering, since we will be faced in the future with construction of more costly hydroelectric plants, nuclear power plants, and coal mines, together with more extensive opening of surface mines.

Taking the actual industrial investment (558 billion dinars) and the national income (1,870 billion dinars) in 1981 as a basis (in current prices) and adopting the desirable version of the percentage of growth of the social production in the future, the document cited earlier, the Strategy for Long Term Development of the Power Engineering of Yugoslavia, gives the following figures (with breakdown by 5-year periods) for the situation in which the electric industry accounts for 8.8 percent of total investments in the economy:

1985-1990 period	around 325 billion dinars
1990-1995 period	around 410 billion dinars
1995-2000 period	around 510 billion dinars

Along with the reservation made in the document that a rough estimate is involved, the figures are presented to give an idea of the order of magnitude of the investments required, that is, the volume of investment and the effort required to secure this great amount of funds in time.

It is to be noted in this connection that increase in electric energy consumption is a definite law which allows of no delay in construction of facilities. Experience in the past has repeatedly confirmed this bitter truth.

## DISINTEGRATIVE TENDENCIES IN ECONOMIC CRISIS DISCUSSED

## Various Studies

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 27 Jun 83 pp 25-26

[Article by Dragan Veselinov: "Legitimacy for the Real"]

[Excerpt] The period of waiting for completion of the work of the Kraigher Commission, presentation of a long-range stabilization program, has been replete with all kinds of economic, socioeconomic, and political economic discussions of a common denominator: the fact that for some time now our society has been experiencing a broad social crisis along with an economic crisis. Opinions to the effect that certain essential elements of a broad crisis, such as politicization of the masses, are absent are rare exceptions. At the level of the economy the causes of the crisis are regarded from two traditional viewpoints, that of income (individuals are not behaving as the norms require) and of the market (suppression of the operation of objective economic laws). Various patterns of the latter are numerous enough to present the appearance of a "third" viewpoint, but these patterns attest rather to efforts to find the right way out of the crisis than to a position on the scale between the two viewpoints referred to. A characteristic of present-day discussions, especially ones with a narrowly defined topic, is rapid shifting to examination of the causes of the negative phenomenon, as it later turns out, of the cause of the crisis, since the negative tendencies of any parameter appear so obvious that no exhaustive presentation of evidence is necessary.

Disintegration as a consequence. Comparison of the gross national product per inhabitant of a number of countries from 1976 to 1980 reveals that the position of 22 European countries relative to Yugoslavia improved, that of one (Sweden) remained the same, and the position of only three nations became worse. These three were Poland, Czechoslovakia and Portugal.

The number of economic enterprises at the end of 1965, 15,359, and at the end of 1974, 11,805, dropped to 8,682 in 1976. If all organizational forms are included, in 1976 there were in the economy of Yugoslavia around 26,000 different organizations and collectives, this number increasing to 34,867 in 5 years (in 1981).

Trade between republics dropped from 27.7 percent to 21.7 percent between 1970 and 1980. Thus the level of trade among the republics and provinces of Yugoslavia is on the average lower than the level of international (foreign) trade of the majority of European countries. On the average, 87.7 percent of all deliveries have been made within the borders of the same republic (province). The figures have been taken from the study by Caslav Ocic, "Integrative and Disintegrative Processes in the Yugoslav Economy." The discussion recently held in connection with these and a large number of other figures in the study point to the conclusion that the economy is not the favored field of disintegration, but rather that disintegration is becoming more pronounced in practically all spheres of Yugoslav society (sociologists are preparing a collection of scholarly studies on this subject to be published in autumn). The demand is presented that (dis)integration not be defined as something a priori evoking a positive or negative response but that disintegration be defined as a minus sign denoting weakening of the efficiency of the local economy. But the question has also been asked whether this society has not deliberately rejected insistence on total efficiency in favor of more uniform social betterment of the members of the collective (in the anticipation that in the long run this will lead to heightening of efficiency). On the other hand, is social regression not becoming apparent in the decline in the standard of living (the 1970 standard has been proposed for 1985) and in the growth of unemployment, and so isn't the inefficiency not being offset and without justification?

Disintegration generates inefficiency but is not the primary cause of the crisis. The theoreticians and advocates of "laissez faire economy" were not present at the discussion of disintegration and so we did not hear the tale about the unsuitable practices and behavior of various (or rather all) social factors (which are undergoing disintegration despite opposite intentions). Those present rather found the roots of the disintegration (and of the crisis as a whole) in the (economic) system, the typical features of which they find to be utopianism, since it is based precisely on the doctrine of "laissez faire," and contradictoriness, since on the one hand it recognizes the market but on the other insists on the conclusion of social contracts and self-management agreements and disregard of the modern laws of production, something reflected primarily in formation of the basic associated labor organization with (as constituted rather by the Law on Associated Labor than by the Constitution) its content of disintegrative elements, which elements lead to atomization of the economy.

Perhaps an excursus to a statement by Marijan Korosic, one of the leading thinkers of the promarket school, provides the best definition of the view of the situation at the moment, from this position, of course. Finding that society is faced with the unavoidable necessity of "enduring a temporary illness for the sake of future health" (many members of society clearly have been suffering illness for some time now, so that it is not just temporary), Korosic states that there is no improvement without new ideas, or without faith in the policy of new ideas. Somewhat later he specifies that he understands new ideas actually to mean "updating of well tested old methods" (operation of the economic mechanism).

Reasons for "reaffirmation" of the bourgeois. We have taken the discussion of Ocicev's study as a starting point, since on this occasion the viewpoint from a "third" position has achieved the status of an "introduction." Slobodan Divjak speaks of the need for controlling capital from within, of the internal destruction of capital production (in this context for recognizing the cost of goods, capital and labor, for eliminating nonproduction income from income as a whole). In his book "Goods and Revolution," in the section on socialist commodity output, Divjak sets forth with precision his thesis on the causes of the existing situation and ways of escaping from it, saying that "the fundamental prerequisite for forming the most suitable project possible for radical social change is, by understanding the class consequences of the historically necessary existence of commodity output under socialism, to remove the ideological illusions and decorative incrustations from the picture of socialist reality. The more thorough is identification of the basic contradictions of socialist existence, the greater is the possibility of making a social commitment to create prospects for rapidly overcoming these contradictions in reality, rather than exclusively in an abstract terminological sense, merely by assigning a socialist attribute to commodity output."

In a paper published at the beginning of the year, Zarko Puhovski expresses himself in quite similar terms, asserting that the immediate cause of the decline of life below the bourgeois level in Yugoslav daily industrial reproduction (bourgeois in the cultural, engineering and technological, democratic political, or any other sense) "lies in the circumstance that the bourgeois basis is not politically (and especially ideologically) recognized as such, that socialist (self-management) epithets are readily assigned to it, something which does not, of course, change this basis in the least. At the same time, society became fed up with the modern bourgeoisie about a generation ago and all have cursed this bourgeoisie from an allegedly superior position, and this is why the coming crisis requires radical reaffirmation of the bourgeois. This does not, of course, mean abandonment of the program for changing the present, but rather linking this program to true perception of what it is: socialism can then be nothing other than communist intervention in the bourgeois world (but such intervention cannot come about if in essence even the existence of the bourgeois is not acknowledged). Unless this is done, we will constantly lag an entire stage behind the world."

The differences between the promarket school and what we have termed the view from a third position may in reality possibly be sought within the framework of motivation, a subject into which we do not wish to enter, at least on this occasion. What is essential is the common demand for perception and acknowledgment of the real relationships, the thesis that a program is to be constructed in harmony with the historical materials. Of course, the real differences of opinion and the actual viewpoints are apparent only when the programs are expressed in concrete terms. And the most concrete program appears to be the one which offers obedience to the objective economic laws, that is, "lubrication" of the economic mechanism, the one mentioned at the beginning of this article: a program of long-term economic stabilization. Hence, the actual viewpoints will become apparent in the process of its implementation, and thus in elaboration of a consistent system of economic constraints and motivation.

## Scientific Meeting

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 27 Jun 83 pp 28-29

[Article by Dr Dragoje Zarkovic: "Causes of Disintegrative and Autarkic Tendencies"]

[Text] Proceeding from the nature of the materials furnished to us\* and from our task at this scientific meeting, as pointed out by the chairman, Dr Zoran Pjanic, I will try in my discussion to indicate what in my opinion are some of the most important causes of the disintegrative and autarkic tendencies, although I must say that it is rather difficult to distinguish between cause and effect, since in this case the effects become new causes, and it is essential not to lose sight of what is the main, original cause of the disintegrative and autarkic tendencies.

In my opinion, one of the most important reasons why socialism as a socio-economic system is unable under present day conditions to demonstrate its superiority over capitalism in the economic sector is the exaggerated extent of political voluntarism, disregard of objective economic laws.

Political voluntarism is primarily the result of an underdeveloped spiritual and material culture, as well as underdevelopment of certain methods of exercising authority, so that a cult is established of politics and of politicians as omniscient and omnipotent persons. This is also favored to a great extent by a personnel policy in which words of authority are spoken by small groups, with personnel selected above all on the basis of obedience. Structures made up of incapable leaders are thereby reproduced. In addition, these structures are encumbered by many dogmatic concepts of socialism which are stubbornly insisted upon. The insufficiently democratic nature of personnel policy leads to insufficient responsibility toward the people and constant repetition and accumulation of errors, especially in the economy.

The domination by political voluntarism is also made possible by underdevelopment of the social sciences, particularly the economic ones, and also by the presence of apologetics, dogmatism, and even utopianism in these sciences. For example, in Yugoslavia in recent years politics has been based to a great extent on the concepts of a small group of utopian economists, something which has done great harm to our society, and particularly to our economy.

Under the conditions of polycentric statism political voluntarism develops autarkic tendencies on a broad front, something which in our country has led to disintegrative processes, to a tendency to create "national" economies not alone at the level of the republics and provinces but at the level of the smaller sociopolitical collectives as well.

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\*Discussion at a scientific meeting held at the Marxist Center of the Central Committee of the League of Communists of Serbia in Belgrade on 26 May 1983, at which the study by Caslav Ocic, "Integrative and Disintegrative Processes in the Yugoslav Economy," was discussed.

This economic development in our country is the result of many circumstances.

I would put first among them the fact that equal conditions for employment (earning and distribution of income) have not been created at the Federal level. For years some activities have in many respects been in a privileged position, but others under highly unfavorable conditions. Under polycentric statism such a situation has unfailingly led to autarkic tendencies on a broad front. The republics, provinces, and even municipalities have taken care to see that privileged activities are developed in their areas, something which has led to atomization and multiplication of production capacities, which have inevitably been economically inefficient. As a matter of fact, even under privileged conditions of operation these capacities have required increasing protection and care on the part of the small sociopolitical collectives, and this has reinforced the polycentric statism and autarky, with all the negative economic and other consequences flowing from them.

Activities which have been discriminated against have remained barely in existence with the aid and care of the smaller sociopolitical collectives, on which they have more and more relied and which have also reinforced polycentric statism and autarky. I am of the opinion that equal operating conditions could have been created long ago at the Federal level, but this was unfortunately not done. I find the causes of this situation to be political voluntarism, disregard of objective economic laws, and misconception of the relationship between politics and economics. What is to be understood by the concept of equal conditions of operation?

Above all it should be understood to mean regarding labor as the foundation of social life and progress, as the only creator of economic values, as the sole criterion of the contribution made by individuals, labor collectives, and activities of society as a whole, as the basis for earning of income and distribution of individual incomes. However, for years all this has been absolutely disregarded, above all at the Federal level. For a long period of time certain highly important levers of economic policy have been, and still are today, at the Federal level, such as prices, the volume of money, customs and other protective systems, interest rates, and so forth. For years the Federal budget has been characterized by deficit financing. Spending has exceeded actual economic capabilities. The reports recently published in the newspapers, to the effect that records have been lost for hundreds, according to some figures thousands of apartments assigned by the Federal government, is highly indicative. For years individual incomes have been paid in advance in the Federal government, while payment of others has been delayed, and so forth. Such a situation at the Federal level has taught the smaller sociopolitical collectives to manage as well as they can on their own, and this has encouraged autarky and disintegrative processes. Foreign economic policy at the Federal level has increasingly insulated the Yugoslav economic area against foreign competition, against operation of the laws of the world market.

Such a situation at the Federal level has had the result that many forms of Yugoslav collective action are regarded as being unitarianism, which is given a very negative rating from the political viewpoint.



An important cause of disintegration and autarky in our economy was, of course, the 1976 Federal law on foreign exchange transactions, on the basis of which the republics and provinces in effect acquired balances of payment of their own; this had a very powerful impact on subsequent development of the "national" economies.

The constant increase in the differences, already large, in the degree of economic development of our republics and provinces has also acted in this direction.

In effect the absence of a unified concept of the long term economic development of Yugoslavia, a concept determining the directions of development of the productive forces of the republics and provinces making up Yugoslavia, has also contributed toward autarkic development and disintegrative processes.

Theoretical concepts of the need for development of the "national" economies of the republics and provinces, as the basis of their sovereignty, have also made their appearance. The very clear position of President Tito in this matter is thus wholly disregarded: "...We have a Federation and a system of social self-management, but we are forming a single unified collective. Integration is a necessity today, and so there should be no difficulties in achieving it. A process of integration is taking place throughout the world. Even the capitalists, who have always quarreled with each other, are forming economic collectives. In our case this can be accomplished even earlier, since only one state rather than several is involved. Our republics have all possible rights from the viewpoint of internal self-management, but there cannot be separate economies for the individual republics, only a common Yugoslav economy" (J. B. Tito, *Self-Management*, vol IV (Collected Works), Associated Publishers, Sarajevo, 1977 p 146).

Under present day conditions, when polycentric statism has become so powerful, when autarkic economic structures have been formed, when certain decisions can be made at the Federal level only on the basis of consensus, it is extremely difficult to overcome many obvious irrationalities in our economic life. As our economic crisis intensifies, economic nationalism must be even more emphatically present, since it is a question of how to survive, especially in view of the highly unfavorable international economic conditions and situations, the more so since the regional differences in economic and cultural development in our country are very pronounced, and even if the best solutions were to be built into the economic system of Yugoslavia, they would result in different situations in the individual republics and provinces.

The frequent abuses of the principle of solidarity have had the result that it has degenerated into a new form of exploitation, and the resistance to it is every more emphatically present. Although it is somewhat more difficult to improve what exists than to build something new, I think that it still is not too late for Yugoslav society to free itself more and more from political voluntarism, for it increasingly to take objective economic and social laws into account, and for conditions of equality in the earning and distribution of income, as well as a unified concept of the long term economic development of Yugoslavia, to be created at the Federal level.

I am confident, then, that there is more in Yugoslavia of what joins us together than of what splits us apart. But the more we hesitate in taking the proper steps for emergence from the existing economic crisis, no matter how good the concept of stabilization may be, the dimmer will become the prospects for making it a reality.

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